XR-3500/3501/3502

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
XR-3500
German Model
XR-3501/3502

Photo : XR-3500

Model Name Using Similar Mechanism	XR-4400/4401/4402
Tape Transport Mechanism Type	MG-36SZ6-32

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US MODEL)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
7 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.13 % (WRMS)
Frequency response	30 - 16,000 Hz
Signal-to- noise ratio	55 dB

Tuner section

FM

Tuning range	US, Canadian model : 87.5—107.9MHz AEP, UK, German model : 87.5—108.0MHz E model : 50kHz/200kHz switchable 87.5—108.0MHz (at 50kHz step) 87.5—107.9MHz (at 200kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	12 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	60 dB (stereo), 65 dB (mono)
Harmonic distortion at 1 kHz	0.6% (stereo), 0.4% (mono)
Separation	30 dB at 1 kHz
Frequency response	30 - 15,000 Hz
Capture ratio	4 dB

—Continued on next page—

FM/AM CASSETTE CAR STEREO
XR-3500/3502

FM/MW/LW CASSETTE CAR STEREO
XR-3501

SONY®

AM (for the XR-3500/3502)

Tuning range	US, Canadian model: 530—1,710kHz AEP, UK model/3502: 531—1,602kHz E model: AM tuning interval: 9kHz/10kHz switchable 531—1,602kHz (at 9kHz step) 530—1,710kHz (at 10kHz step)
Antenna terminal	External antenna connector
Intermediate frequency	450 kHz
Sensitivity	30 μV

MW/LW (for the XR-3501)

Tuning range	MW: 531 – 1,602 kHz LW : 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	450 kHz
Sensitivity	MW: 30 μV LW : 50 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	Except E model: 15W×4 (at 4 ohms) E model: 20W×4 (at 4 ohms)

General

Output lead	Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 186 × 57 × 170 mm ($7\frac{3}{8} \times 2\frac{1}{4} \times 6\frac{3}{4}$ in.) (w/h/d) not incl. projecting parts and controls
Mounting dimension	Approx. 182 × 53 × 154 mm ($7\frac{1}{4} \times 2\frac{1}{8} \times 6\frac{1}{8}$ in.) (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.3 kg (2 lb 14oz.)
Supplied accessories	Power connecting cord (1) Mounting hardware (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Features

General

- **Detachable-front panel** enables you to take the front panel away with you when you leave your car.
- **Caution alarm** will be activated if you turn off the ignition key without removing the front panel from the unit.
- **Built-in power amplifier (max. output: 15 W × 4 ch)** enables you to enjoy a 4-speaker system. (Except E model)
- **Built-in power amplifier (max. output: 20 W × 4 ch)** enables you to enjoy a 4-speaker system. (E model)
- Provided with a digital **24-hour clock.** (AEP, UK, German model)
- Provided with a digital **12-hour clock.** (US, Canadian, E model)

Cassette player section

- **ATA (Automatic Tuner Activation)** for automatically turning on the tuner while fast-forwarding or rewinding a tape.

Tuner section

- Up to 18 stations can be preset: 12 stations on FM and 6 stations each on AM. (for the XR-3500/3502)
- Up to 24 stations can be preset: 12 stations on FM, 6 stations each of MW and LW. (for the XR-3501)
- **Automatic Memory function** stores a total of 18 stations for the XR-3500/3502 (24 stations for the XR-3501) in memory quickly and easily.

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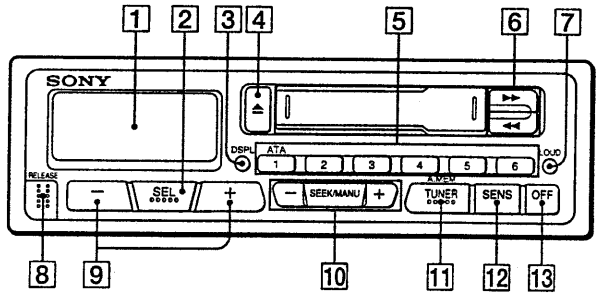
Button Locations



Refer to the pages in ● for details.

1 Display window
2 SEL (control mode select) button ❺❽
3 DSPL (display mode change/time set) button ❺
4 ⏏ (eject) button ❺
5 During radio reception:
Preset number buttons ❼
During tape playback:
ATA (Automatic Tuner Activation) button ❻
6 ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons ❺❻
7 LOUD (loudness) button ❽
8 RELEASE (front panel release) button ❹❽
9 (volume/bass/treble/balance/fader control) button ❺❽
10 SEEK/MANU button ❻❼
11 TUNER/A.MEM (radio on • band select/automatic memory) button ❻❼
12 SENS (sensitivity adjust) button ❻
13 OFF button ❹

Setting the Clock

The clock has a 24-hour digital indication.

For example, setting it to 10:08

1 Display the time.
(Press the DSPL button during unit operation.)

2 Press the DSPL button for more than two seconds.

The hour digit blinks.

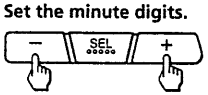
Set the hour digits.

(to go back) (to go forward)

3 Press the SEL button momentarily.

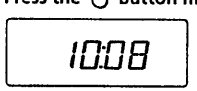
The minute digit blinks.

Set the minute digits.



(to go back) (to go forward)

4 Press the DSPL button momentarily.



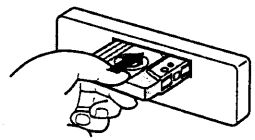
The clock activates.

Note
The clock cannot be set unless the power is turned on. Set the clock after you turned on the radio, or tape playback.

Cassette Player Operation

Listening to Tape Playback

After inserting the cassette, playback will start automatically.



To change the tape direction,
press both the ◀◀ and the ▶▶ button at the same time.

Indication of Tape Transport Direction

The side facing up is being played.

The side facing down is being played.

Tape playback automatically changes direction at the end of the tape.

Note
Before turning off the unit, eject the tape to avoid tape damage.

Ejecting the Cassette

Press the ⏏ button to stop playback and eject the cassette.

This section is extracted from XR-3500/3501's instruction manual.

Fast-winding the Tape

Direction indicator*	To advance	To rewind
►		
◄		

To resume playback, press the other fast-winding button until the locked button is released.

* ◄ *or* ► *indicator will flash while fast-winding the tape.*

EN

Radio Reception during Fast-forwarding or Rewinding of a Tape

— ATA (Automatic Tuner Activation) Function

Press the ATA 1 button during playback.
→ "ATA" appears on the display.
When fast-forwarding or rewinding with the ◄◄ or ►► button, the tuner will turn on automatically.

5

Radio Reception

Searching for the Stations Automatically

— Automatic Tuning

1 Select the desired band.

XR-3500:
FM1 → FM2 → AM → FM1

XR-3501:
FM1 → FM2 → MW → LW → FM1

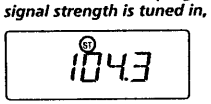
2 Press either side of the SEEK/MANU button momentarily to search for the station (automatic tuning).

For lower frequencies

For higher frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

When an FM stereo program with a sufficient signal strength is tuned in,



the "ST" indication will appear.

To avoid the automatic tuning from stopping on stations too frequently (local seek mode), press the SENS button momentarily to get the "LCL" indication.
Only the stations with relatively strong signals can be tuned in. The local seek mode functions only when the automatic tuning is in operation.

Tuning in by Adjusting the Frequency — Manual Tuning

1 Select the desired band.

XR-3500:
FM1 → FM2 → AM → FM1

XR-3501:
FM1 → FM2 → MW → LW → FM1

2 Press and hold either side of the SEEK/MANU button.
Release the button when the desired station is received.

For lower frequencies

For higher frequencies

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning and the memory preset tuning instead of the manual tuning.

Memorizing Stations Automatically

— Automatic Memory Function

Stations with clearst reception are automatically searched and memorized on each band (FM1, FM2 and AM (MW, LW for the XR-3501)). Up to 6 stations on each band can be stored on the preset number buttons 1 to 6 in the order of frequency.

1 Select the desired band.

XR-3500:
FM1 → FM2 → AM → FM1

XR-3501:
FM1 → FM2 → MW → LW → FM1

2 Press the TUNER/A.MEM button for more than two seconds.

The unit will be start scaning the selected band and memorizes the tuned stations on the preset number button 1 through 6 automatically.

Memorizing Only the Desired Stations

1 Select the desired band.

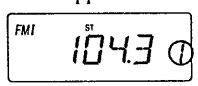
XR-3500:
FM1 → FM2 → AM → FM1

XR-3501:
FM1 → FM2 → MW → LW → FM1

2 Tune in the station which you wish to store on the preset number button.

3 Keep the desired preset number button (ATA 1 to 6) pressed for about two seconds until you hear a beep tone.

The number of the pressed preset number button appears on the display window.



Up to 6 stations on each band (FM1, FM2 and AM (MW, LW for the XR-3501)) can be stored on the preset number buttons in order of your choice. Therefore, 12 stations can be memorized on FM.
If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the Memorized Stations

1 Select the desired band.

XR-3500:
FM1 → FM2 → AM → FM1

XR-3501:
FM1 → FM2 → MW → LW → FM1

2 Press momentarily the preset number button on which the desired station is stored.

Note
If you press the preset number button for more than two seconds, the currently received station will be memorized again. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.

EN

Other Functions

Adjusting the Sound Characteristics

1 Select the item you want to adjust by pressing the SEL button repeatedly.

VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader) → VOL (volume)

2 Adjust the selected item by pressing either the − or + button.

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

EN

Enjoying Bass and Treble even at Low Volume

— Loudness Function

Press the LOUD button. → "LOUD" will appear on the display.
Bass and treble will be reinforced. To cancel, press again.

Maintenance

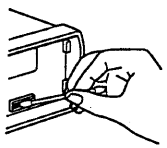
Fuse Replacement

When replacing the fuse, be sure to use one with the correct amperage which is stated on the fuse case. Never use a fuse whose amperage rating exceeds the one supplied to the unit as this could cause a malfunction of the unit.

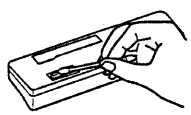
Warning
Use a fuse with the specified amperage.
Use of a fuse with higher amperage may cause serious damage.

Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. In order to prevent this, open the front panel by pressing the RELEASE button, then detach it and clean with a cotton swab which was dipped in alcohol. Do not apply too much force. Otherwise, the connector may get damaged.



Main unit



Back of the front panel

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the yellow and red power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common ground point.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant d'effectuer les raccordements, débranchez la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Raccordez les fils jaune et rouge d'alimentation uniquement après avoir effectué toutes les autres connexions.
- Raccordez le fil d'alimentation rouge à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoire.
- Rassemblez tous les fils de terre en un point de masse commun.

Anschluß

Vorsicht

- Dieses Gerät ist ausschließlich für eine negativ geerdete 12-V-Autobatterie bestimmt.
- Trennen Sie vor dem Anschließen des Geräts die Erdungsklemme der Batterie ab, um einen Kurzschluß zu vermeiden.
- Schließen Sie das gelbe und rote Stromversorgungskabel erst an, wenn alle anderen Kabel bereits angeschlossen sind.
- Leiten Sie das rote Stromversorgungskabel an einen positiven 12-V-Kontakt des Bordnetzes, der in der Zubehörposition des Zündschlosses unter Strom steht.
- Leiten Sie alle Erdungskabel an einen gemeinsamen Massepunkt ab.

Collegamenti

Attenzione

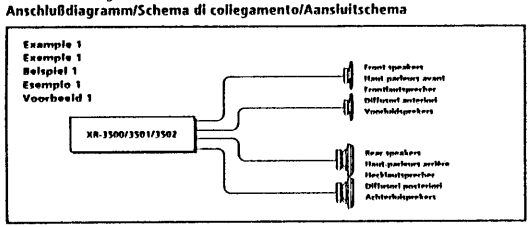
- Questo apparecchio è stato progettato per l'uso solo in funzionamento a 12 V C.C con massa negativa.
- Prima di eseguire i collegamenti, scollegare il terminale di massa della batteria dell'auto per evitare cortocircuiti.
- Collegare i cavi di collegamento alimentazione rosso e giallo solo dopo aver collegato tutti gli altri cavi.
- Assicurarsi di collegare il cavo rosso di collegamento alimentazione al terminale di alimentazione 12 V positivo che è sotto tensione quando la chiavetta di accensione è in posizione accessorio.
- Portare tutti i cavi di massa a un punto di massa comune.

Aansluitingen

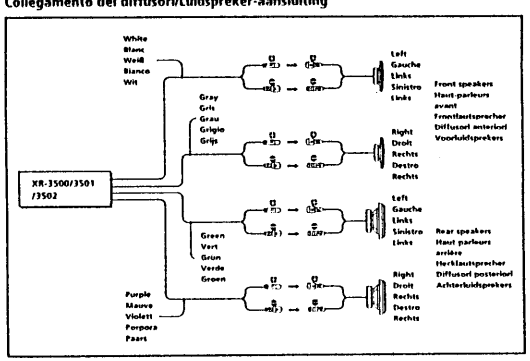
Let op!

- Dit apparaat is ontworpen voor gebruik op gelijkstroom van een 12 Volts auto accu, negatief geaard.
- Alvorens te beginnen met het maken van aansluitingen, dient de aardklem van de autoaccu te worden losgemaakt. Dit om kortsluiting te voorkomen.
- Sluit de gele en rode stroomdraden pas aan nadat alle andere aansluitingen zijn gemaakt.
- Zorg ervoor dat de rode stroomdraad op de positieve 12 V accu-aansluiting wordt aangesloten. De draad komt dan onder spanning te staan wanneer de contactsleutel wordt omgedraaid (naar "Acc").
- Sluit alle aarddraden op een gemeenschappelijk aardpunt aan.

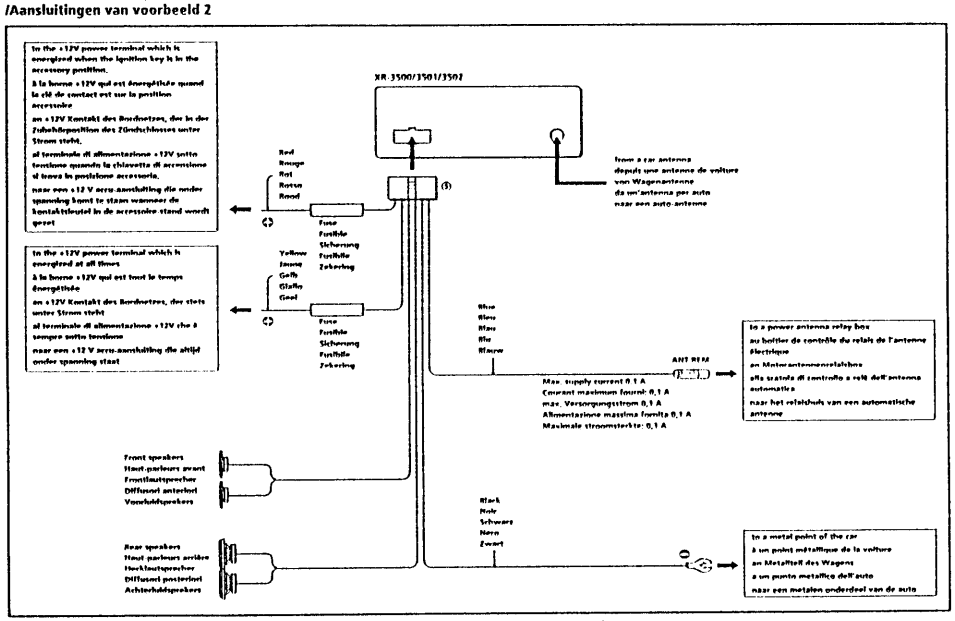
Connection Diagram/Schéma de connexions/ Anschlußdiagramm/Schema di collegamento/Aansluitschema



Speaker Connections/Connexion des haut-parleurs/Lautsprecheranschluß/ Collegamento dei diffusori/Luidspreker-aansluiting



Connections of Example 2/Connexions de l'exemple 2/Anschlußbeispiel 2/ Collegamenti per l'esempio 2 /Aansluitingen van voorbeeld 2


In the +12V power terminal which is energized when the ignition key is in the accessory position.
à la borne +12V qui est énergétisée quand la clé de contact est sur la position accessoire
an +12V Kontakt des Bordnetzes, der in der Zubehörposition des Zündschlosses unter Strom steht.
al terminale di alimentazione +12V sotto tensione quando la chiavetta di accensione si trova in posizione accessorio.
naar een +12 V aero-aansluiting die onder spanning komt te staan wanneer de contactsleutel in de accessoire stand wordt gezet
In the +12V power terminal which is energized at all times
à la borne +12V qui est tout le temps énergétisée
an +12V Kontakt des Bordnetzes, der stets unter Strom steht
al terminale di alimentazione +12V che è sempre sotto tensione
naar een +12 V aero-aansluiting die altijd onder spanning staat
XR-3500/3501/3502
Red
Rouge
Rot
Rosso
Rood
Yellow
Jaune
Gelb
Giallo
Geel
Fuse
Fusible
Sicherung
Fusibile
Zekering
Blue
Bleu
Blau
Blu
Blauw
From a car antenna
depuis une antenne de voiture
von Wagenantenne
da un'antenna per auto
naar een auto antenne
ANT REM
Max. supply current 0.1 A
Courant maximum fourni: 0,1 A
max. Versorgungsstrom 0,1 A
Alimentazione massima fornita 0,1 A
Maximale stroomsterkte: 0,1 A
to a power antenna relay box
au boîtier de contrôle du relais de l'antenne électrique
an Motorantennenrelaisbox
alla scatola di controllo a relè dell'antenna automatica
naar het relaishuis van een automatische antenne
Front speakers
Haut-parleurs avant
Frontlautsprecher
Diffusori anteriori
Voorluidsprekers
Rear speakers
Haut parleurs arrière
Hecklautsprecher
Diffusori posteriori
Achterluidsprekers
Black
Noir
Schwarz
Nero
Zwart
to a metal point of the car
à un point métallique de la voiture
an Metallteil des Wagens
a un punto metallico dell'auto
naar een metalen onderdeel van de auto

Notes on speaker connections

- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not connect the speakers in parallel.*
- *Do not connect any active speakers with built-in amplifiers to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Hinweise zum Lautsprecheranschluß

- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Schließen Sie normale Lautsprecher parallel an.*
- *An die Lautsprecheranschlüsse dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie auf keinen Fall Aktivlautsprecher an, die dies zur Beschädigung führt.*

Opmerkingen betreffende het aansluiten van de luidsprekers

- *Gebruik luidsprekers met een impedantie van 4 tot 8 Ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.*
- *Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.*
- *Probeer niet de luidsprekers parallel aan te sluiten.*
- *Sluit geen actieve luidsprekers (luidsprekers met ingebouwde versterker) aan op de luidsprekeraansluitingen van het apparaat. Dit kan resulteren in beschadiging van de actieve luidsprekers. Op deze aansluitingen mogen uitsluitend passieve luidsprekers worden aangesloten.*

Remarques sur la connexion des haut-parleurs

- *Utiliser des haut-parleurs avec une impédance de 4 à 8 ohms et qui peuvent supporter l'alimentation fournie sinon de risque existe d'être endommagés.*
- *Ne pas connecter les bornes du système de haut-parleur au châssis de la voiture et ne pas raccorder les bornes du haut parleur droit aux bornes du haut parleur gauche.*
- *Ne pas essayer de connecter les haut-parleurs en parallèle.*
- *Ne pas connecter d'enceintes acoustiques actives (avec amplificateur intégré) aux bornes d'enceinte de cet appareil, pour éviter d'endommager les enceintes. Veiller à raccorder des enceintes passives.*

Note sul collegamento dei diffusori

- *Usare diffusori di impedenza compresa tra i 4 e i 8 ohm e con capacità di potenza adeguate, altrimenti i diffusori potranno essere danneggiati.*
- *Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.*
- *Non collegare i diffusori in parallelo.*
- *Non collegare diffusori attivi (con amplificatore incorporato) ai terminali diffusori di apparecchio perché i diffusori attivi potrebbero essere danneggiati. Collegare solo diffusori passivi a questi terminali.*

Notes on the control leads

- *The power antenna control lead (blue) supplies 12V DC when you turn on the unit.*
- *A power antenna without relay box cannot be used with this unit.*

Remarques sur les fils de contrôle

- *Le fil de contrôle de l'antenne électrique (bleu) fournit du courant continu de 12V lorsque vous mettez l'appareil sous tension.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisé avec cet appareil.*

Hinweise zu den Steuerleitungen

- *Die Motorantenne (blaue Steuerleitung) benötigt eine Gleichspannung von +12V, wenn Sie das Gerät einschalten.*
- *Eine Motorantenne ohne Relaisbox kann nicht angeschlossen werden.*

Note sul cavi di collegamento

- *Il cavo di controllo dell'antenna automatica (blu) fornisce 12V C.C quando si accende il sintonizzatore.*
- *Non è possibile usare un'antenna automatica senza la scatola a relè con questo apparecchio.*

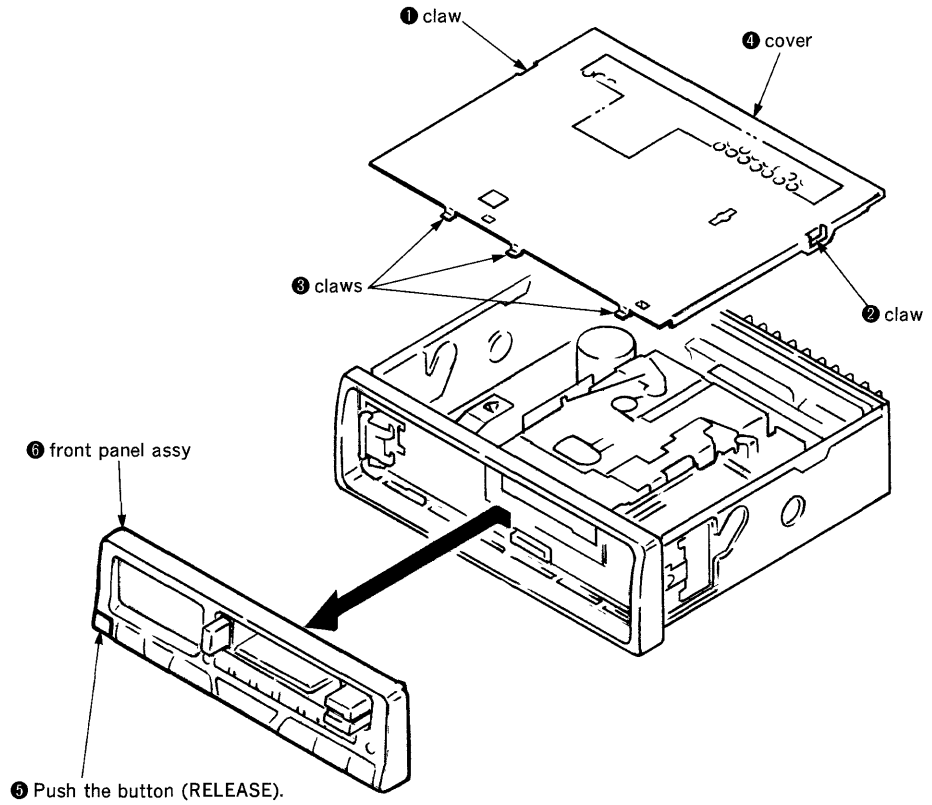
Opmerkingen betreffende de bedieningsaansluitingen

- *Het aansluitsnoer van de automatische antenne (blauw) levert +12V gelijkstroom als het toestel wordt ingeschakeld.*
- *Met dit apparaat is het niet mogelijk een automatische antenne zonder relaishuis te gebruiken.*

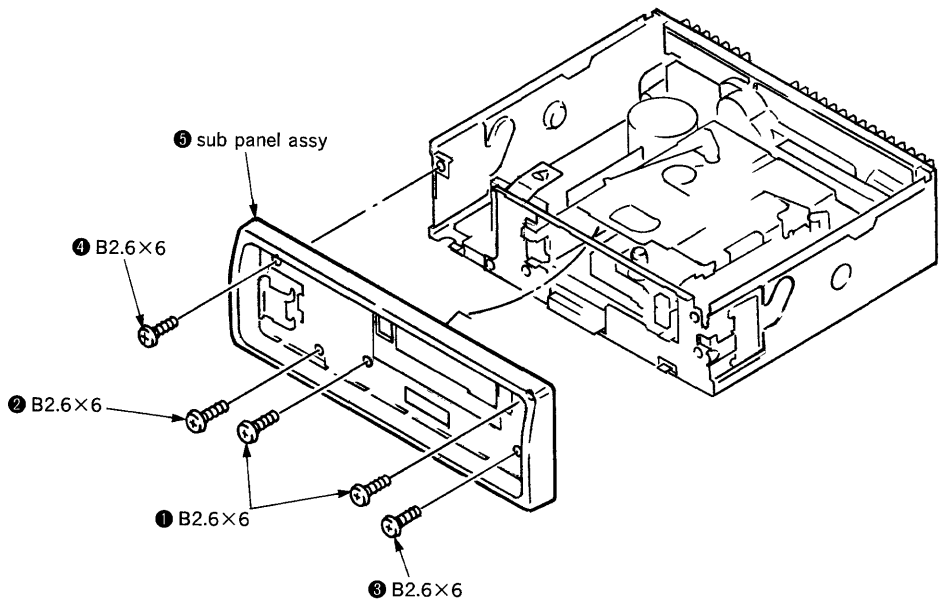
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

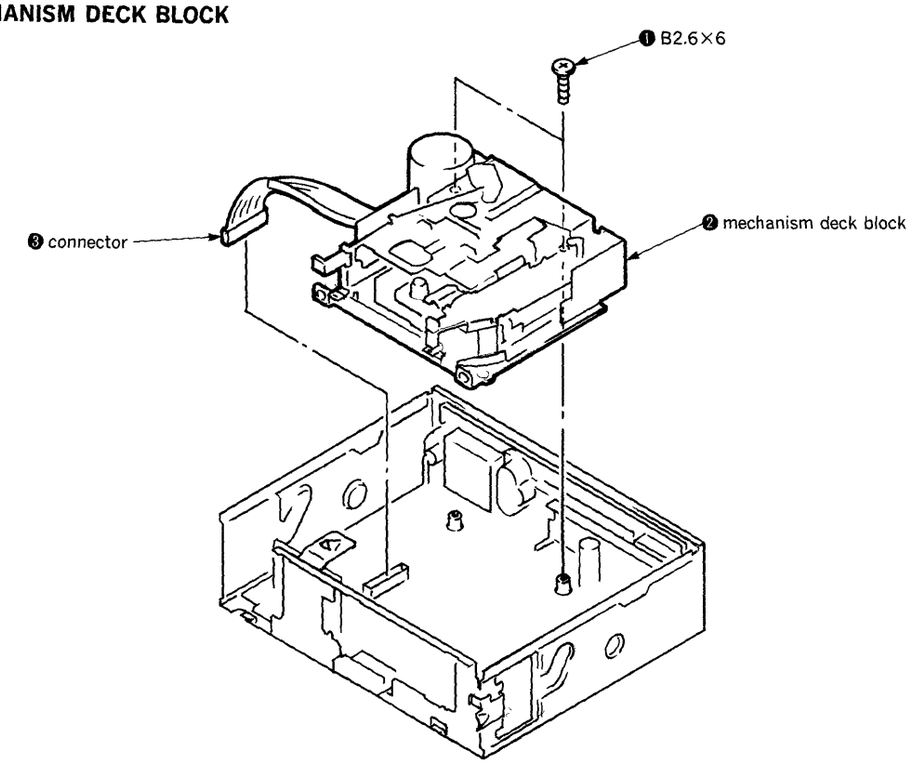
2-1. COVER



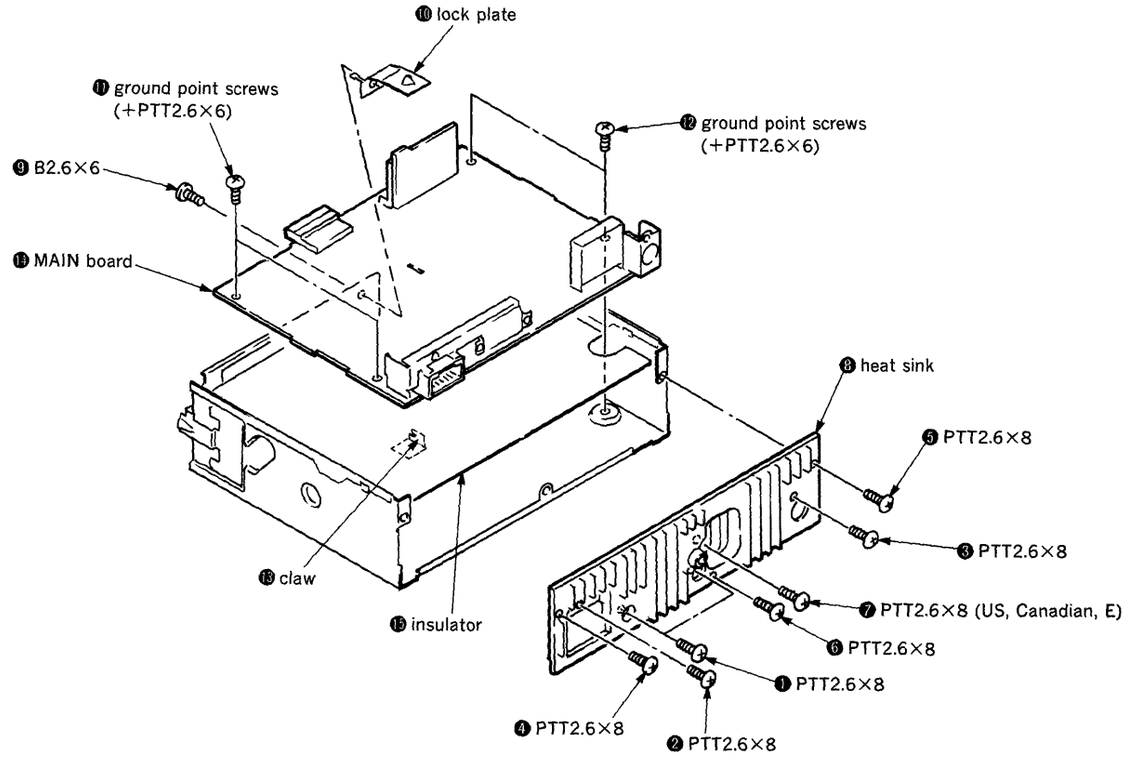
2-2. SUB PANEL ASSY



2-3. MECHANISM DECK BLOCK



2-4. MAIN BOARD



SECTION 3
DIAGRAMS

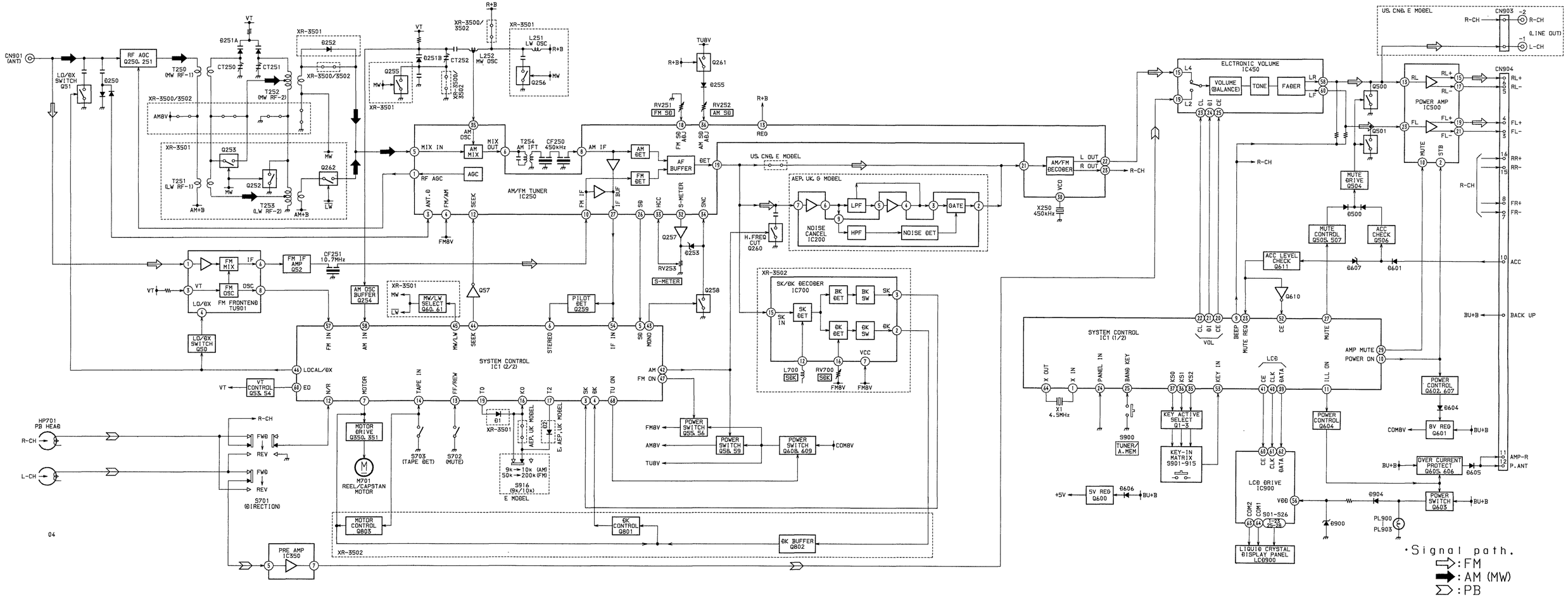
3-1. IC PIN DESCRIPTION

System Control LC7233N-8946 (IC1) (XR-3500/3501)
LC7233N-8942 (IC1) (XR-3502)

Pin No.	Pin Name	I/O	Pin Description
1	X IN	I	Connect to crystal. (4.5MHz)
2	—	—	Connect to GND.
3	SK	I	At with SK : High input (XR-3502 only)
4	DK	I	At with DK : High input (XR-3502 only)
5	SD	I	At with SD : High input
6	STEREO	I	At STEREO : Low input
7	MOTOR	O	Reel/capstan motor control terminal. At MOTOR-ON : High output
8	—	—	Not used.
9	BEEP	O	For piezoelectric buzzer output terminal
10	POWER ON	O	At POWER-ON : High output
11	ILL ON	O	At ACC-ON : High output, at ACC-OFF : Low output
12	N/R	I	NORMAL/$\overline{\text{REVERSE}}$ output terminal
13	FF/REW	I	At TAPE : High input, at RADIO : Low input
14	TAPE IN	I	At TAPE IN : Low input
15	K1	—	Connect to GND.
16	K0	I	Diode matrix input
17	T2	O	Diode matrix output
18	T1	—	Not used.
19	T0	O	Diode matrix output
20	VOL CE	O	Chip Enable output terminal to ELECTRONIC VOLUME IC (IC450).
21	VOL DI	O	Data output terminal to ELECTRONIC VOLUME IC (IC450).
22	VOL CL	O	Clock output terminal to ELECTRONIC VOLUME IC (IC450).
23	MUTE REQ	I	At ACC-OFF : High input
24	PANEL IN	I	At Detachable IN : Low input, at Detachable OUT : High input
25	BAND KEY	I	At TUNER-ON : Low input
26	—	—	Connect to GND.
27	MUTE	O	Audio mute output terminal
28	—	—	Not used.
29	AMP MUTE	O	Power amplifier mute output terminal
30—34	—	—	Not used.
35—37	KS2—KS0	O	Key matrix output
38	—	—	Not used.
39	LCD DATA	O	Data output terminal to LCD drive IC (IC900).
40	LCD CLK	O	Clock output terminal to LCD drive IC (IC900).
41	LCD CE	O	Chip Enable output terminal to LCD drive IC (IC900).
42	AM	O	At AM (MW) : High output
43	MONO	O	At Monaural : High output
44	SEEK	O	At SEEK : Low output
45	MW/LW	O	At MW : High output, at LW : Low output (XR-3501 only)
46	LOCAL/DX	O	At STEREO LOCAL : High output, at STEREO DX or MONO DX : Low output
47	FM ON	O	At FM : High output, at AM (MW or LW) : Low output
48	TUNER ON	O	At RADIO : High output, at OFF or TAPE : Low output

Pin No.	Pin Name	I/O	Pin Description
49—51	—	—	Not used.
52	CE	I	Chip Enable input terminal
53	KEY IN	I	Key matrix signal input terminal
54	IF IN	I	FM/AM IF input terminal
55	BU CHECK	I	Back-up voltage detection terminal
56	VDD	—	Power supply terminal (+5V)
57	FM IN	I	FM local OSC input terminal
58	AM IN	I	AM local OSC input terminal
59	GND	—	GND
60	EO	O	Phase comparator output terminal
61	LPF IN	—	Connect to GND.
62	LPF OUT	—	Not used.
63	—	—	Not used.
64	X OUT	O	Connect to crystal. (4.5MHz)

3-2. BLOCK DIAGRAM



- Signal path.
  - ⇨ : FM
  - ➡ : AM (MW)
  - ⇨ : PB
- Abbreviations
  - CNĐ : Canadian model
  - G : German model

3-3. PRINTED WIRING BOARDS

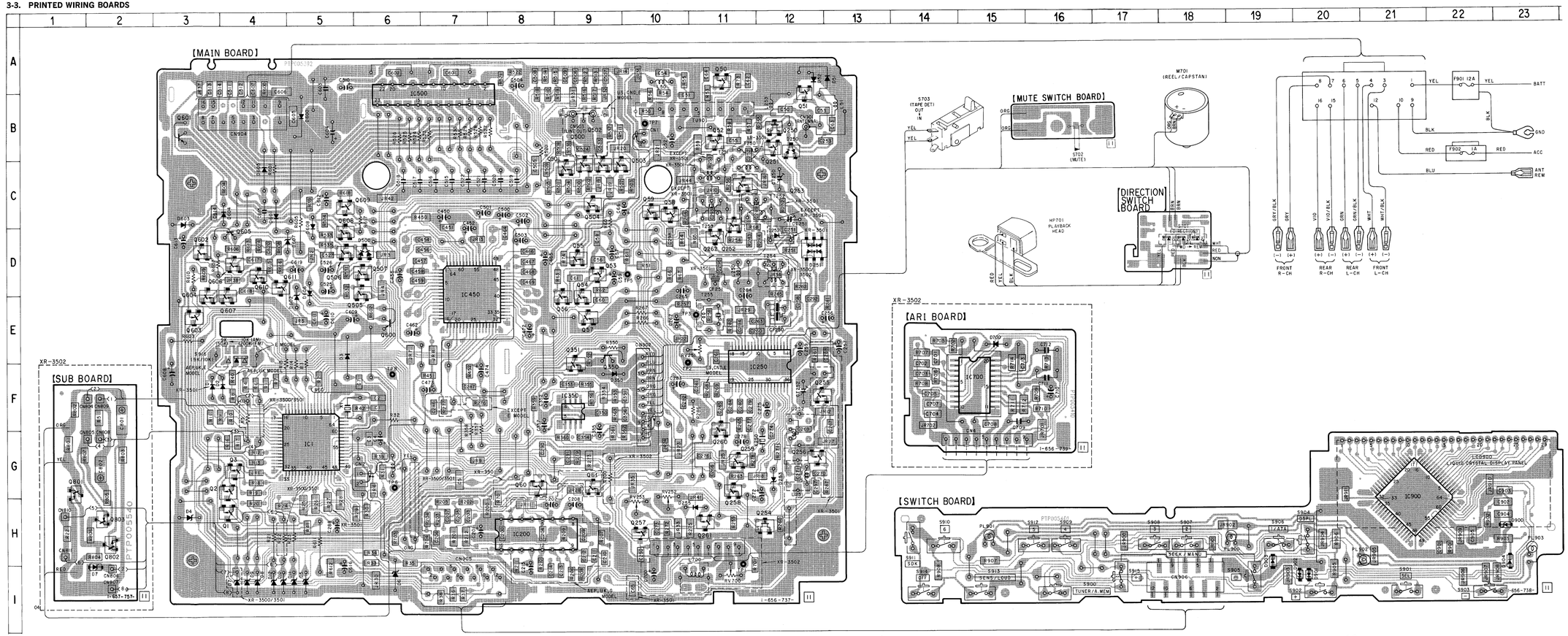
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
(D1)	F-3	Q50	A-11
<D2>	F-3	Q51	B-12
D3	E-5	Q52	B-11
D4	H-3	Q53	D-9
D5	I-5	Q54	D-9
D6	I-6	Q55	D-9
{D7}	H-2	Q56	D-9
((D7))	I-4	Q57	E-9
D8	I-4	Q58	C-10
D9	I-4	Q59	C-10
D10	I-4	(Q60)	G-8
D11	I-5	(Q61)	G-9
D12	I-4	Q250	B-12
D51	A-13	Q251	B-12
D52	A-12	(Q252)	D-11
D250	B-12	(Q253)	C-11
D251	D-12	Q254	H-12
(D252)	D-12	(Q255)	F-12
D253	G-12	(Q256)	G-12
D255	H-10	Q257	H-10
D350	F-9	Q258	G-11
D500	D-6	Q259	G-11
D600	B-5	Q260	F-11
D601	C-4	Q261	H-11
D602	E-5	(Q262)	D-11
D603	C-3	Q350	E-9
D604	C-4	Q351	E-9
D605	C-4	Q500	C-9
D606	D-5	Q501	C-9
D607	D-5	Q502	C-9
D608	C-5	Q503	C-10
{D700}	E-15	Q504	C-9
D900	H-23	Q505	E-6
D901	I-20	Q506	D-5
D902	I-20	Q507	D-6
D903	I-19	Q600	E-6
D904	I-23	Q601	B-3
		Q602	D-3
IC1	G-5	Q603	E-3
((IC200))	H-8	Q604	D-3
IC250	E-11	Q605	D-4
IC350	F-9	Q606	D-4
IC450	D-7	Q607	E-4
IC500	B-7	Q608	D-5
{IC700}	F-15	Q609	C-5
IC900	H-21	Q610	D-4
		Q611	D-4
Q1	H-4	{Q801}	G-1
Q2	G-4	{Q802}	H-2
Q3	G-4	{Q803}	H-2

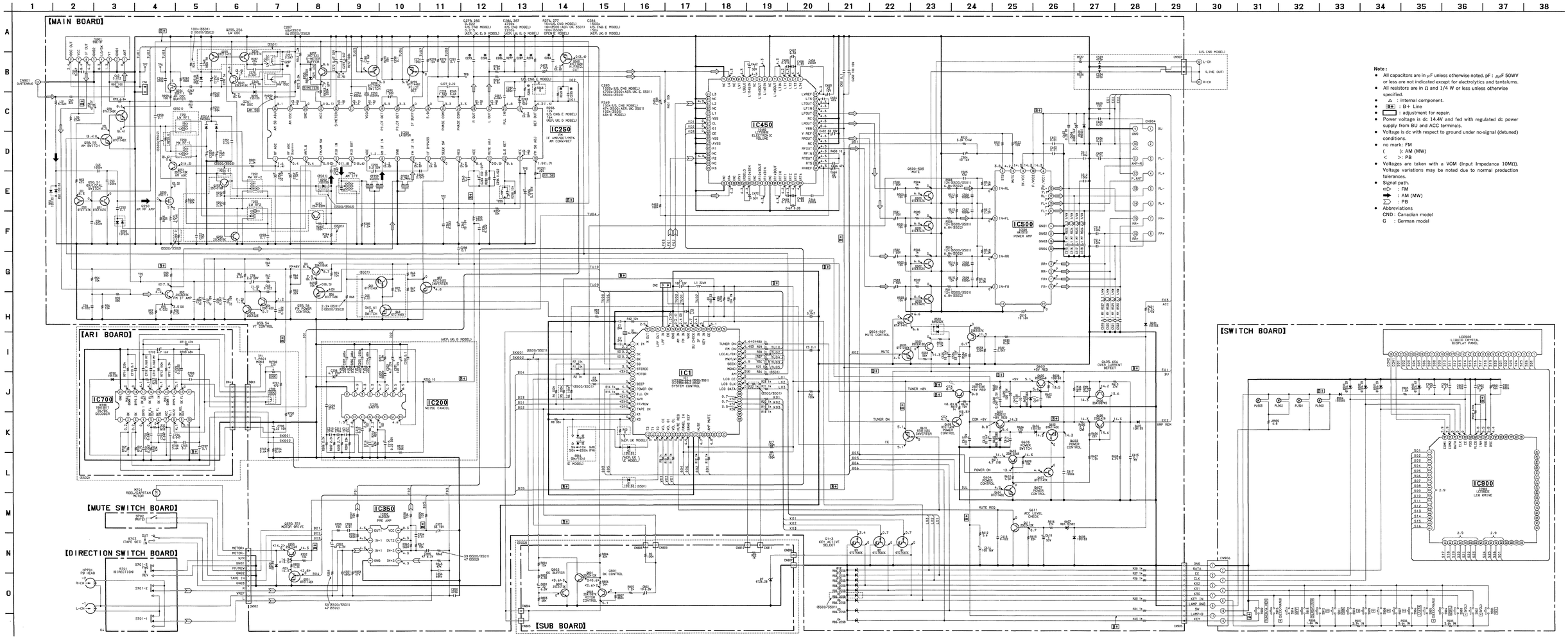
( ) : XR-3501
< > : AEP, UK, E model
{ } : XR-3502
(( )) : XR-3500/3501
<< >> : AEP, UK, G model

Note :

- ○— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▭ : Pattern on the side which is seen.
- Abbreviations
  CND : Canadian model
  G : German model

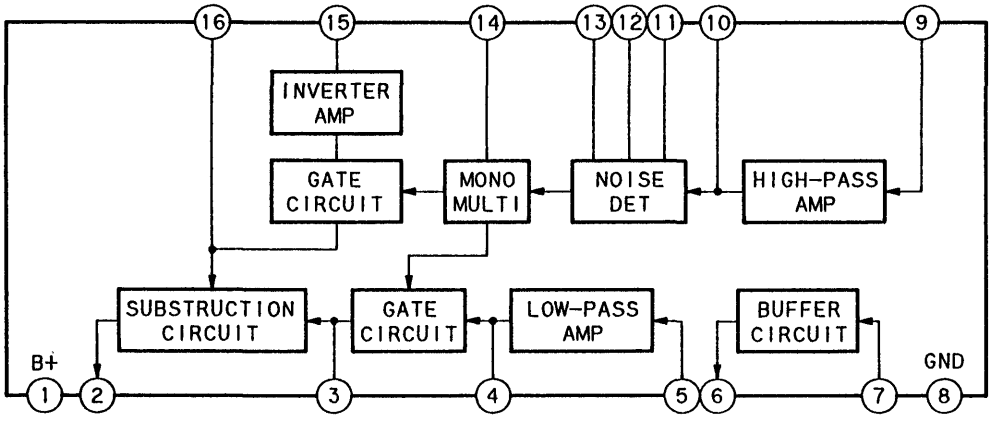


3-4. SCHEMATIC DIAGRAM • Refer to page 24 for IC Block Diagrams.

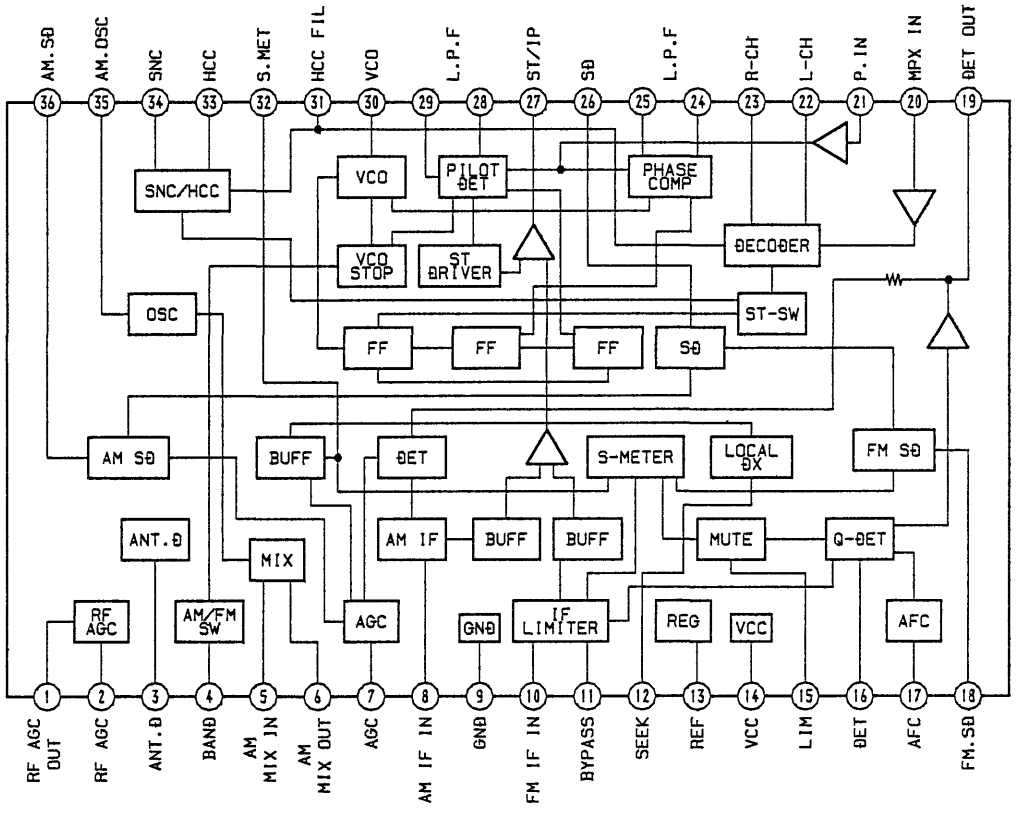

【MAIN BOARD】
【ARI BOARD】
【MUTE SWITCH BOARD】
【DIRECTION SWITCH BOARD】
【SUB BOARD】
【SWITCH BOARD】
IC1
IC200
IC250
IC350
IC450
IC500
IC700
IC900
Note :
• All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
• All resistors are in Ω and 1/4 W or less unless otherwise specified.
• △ : internal component.
• (B+) : B+ Line
• : adjustment for repair.
• Power voltage is dc 14.4V and fed with regulated dc power supply from BU and ACC terminals.
• Voltage is dc with respect to ground under no-signal (detuned) conditions.
• no mark: FM
( ): AM (MW)
< >: PB
• Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
• Signal path.
: FM
: AM (MW)
: PB
• Abbreviations
CND : Canadian model
G : German model

• **IC Block Diagrams**

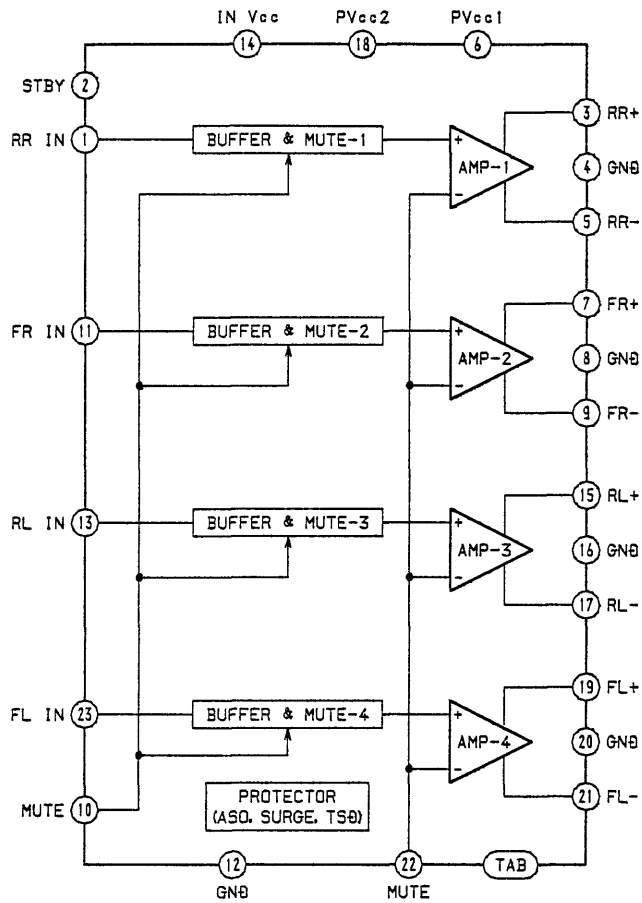
IC200 LA2113 (AEP, UK, German Model)



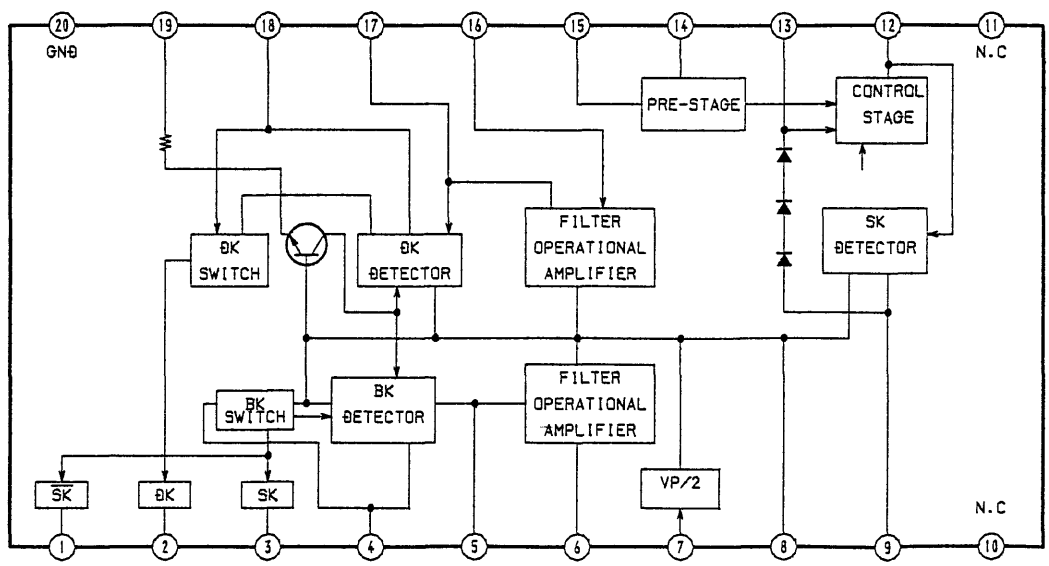
IC250 LA1875M



IC500 HA13151



IC700 TDA1581T (XR-3502)

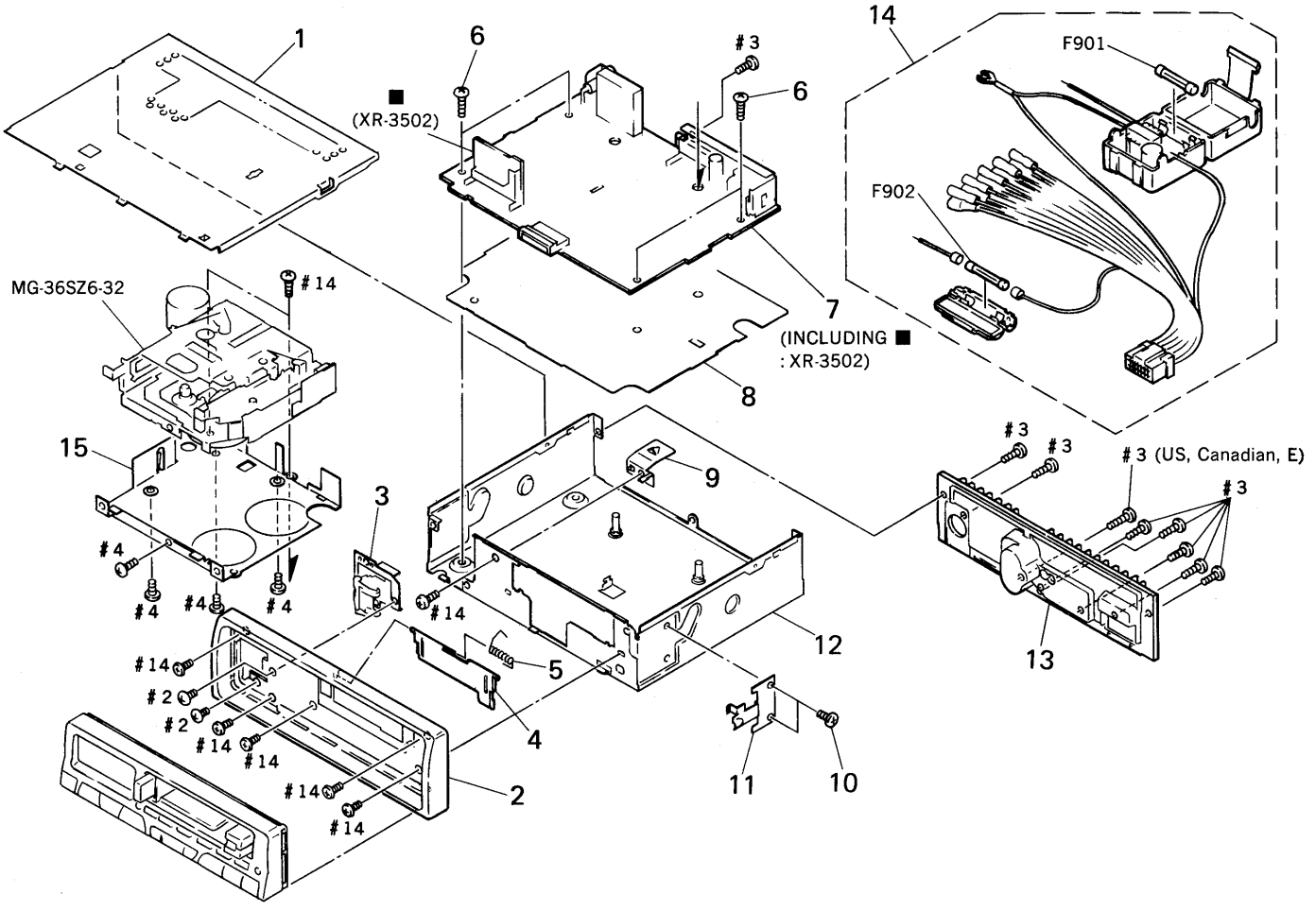


SECTION 4
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  G : German model

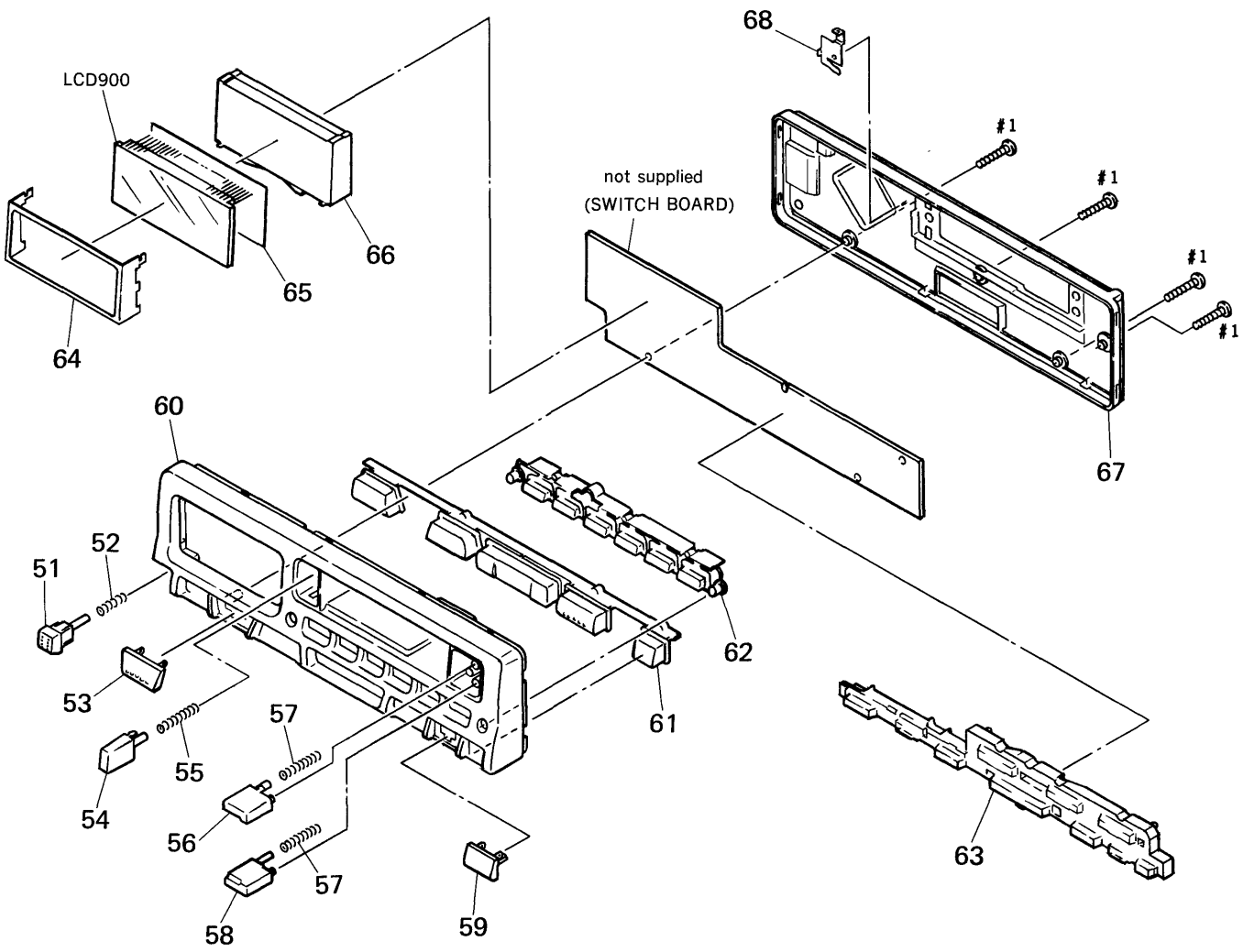
4-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-922-517-01	COVER	
2	3-922-500-01	PANEL, SUB	
3	X-3367-636-1	LOCK ASSY	
4	3-924-404-01	DOOR, CASSETTE (EXCEPT 3501)	
4	3-924-404-11	DOOR, CASSETTE (3501)	
5	3-377-892-01	SPRING (C DOOR), TORSION	
6	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 7	A-3222-910-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 7	A-3222-911-A	MAIN BOARD, COMPLETE (AEP, UK)	
* 7	A-3222-912-A	MAIN BOARD, COMPLETE (3501)	
* 7	A-3222-913-A	MAIN BOARD, COMPLETE (INCLUDING ARI BOARD) (3502)	
* 7	A-3222-923-A	MAIN BOARD, COMPLETE (E)	

Ref. No.	Part No.	Description	Remark
* 8	3-922-512-01	INSULATOR	
* 9	3-909-089-01	PLATE, LOCK	
10	3-344-561-21	SCREW (M4X4)	
* 11	3-909-090-01	PLATE (R), LOCK	
* 12	X-3369-999-1	CHASSIS ASSY	
* 13	3-922-519-01	HEAT SINK (US, Canadian, E)	
* 13	3-924-502-01	HEAT SINK (AEP, UK, G)	
14	1-769-625-11	CORD (WITH CONNECTOR) (US, Canadian, E)	
14	1-769-625-21	CORD (WITH CONNECTOR) (AEP, UK, G)	
* 15	3-924-507-01	BRACKET (MD)	
F901	1-532-678-11	FUSE (12A/125V)	
F902	1-532-351-XX	FUSE (1A)	

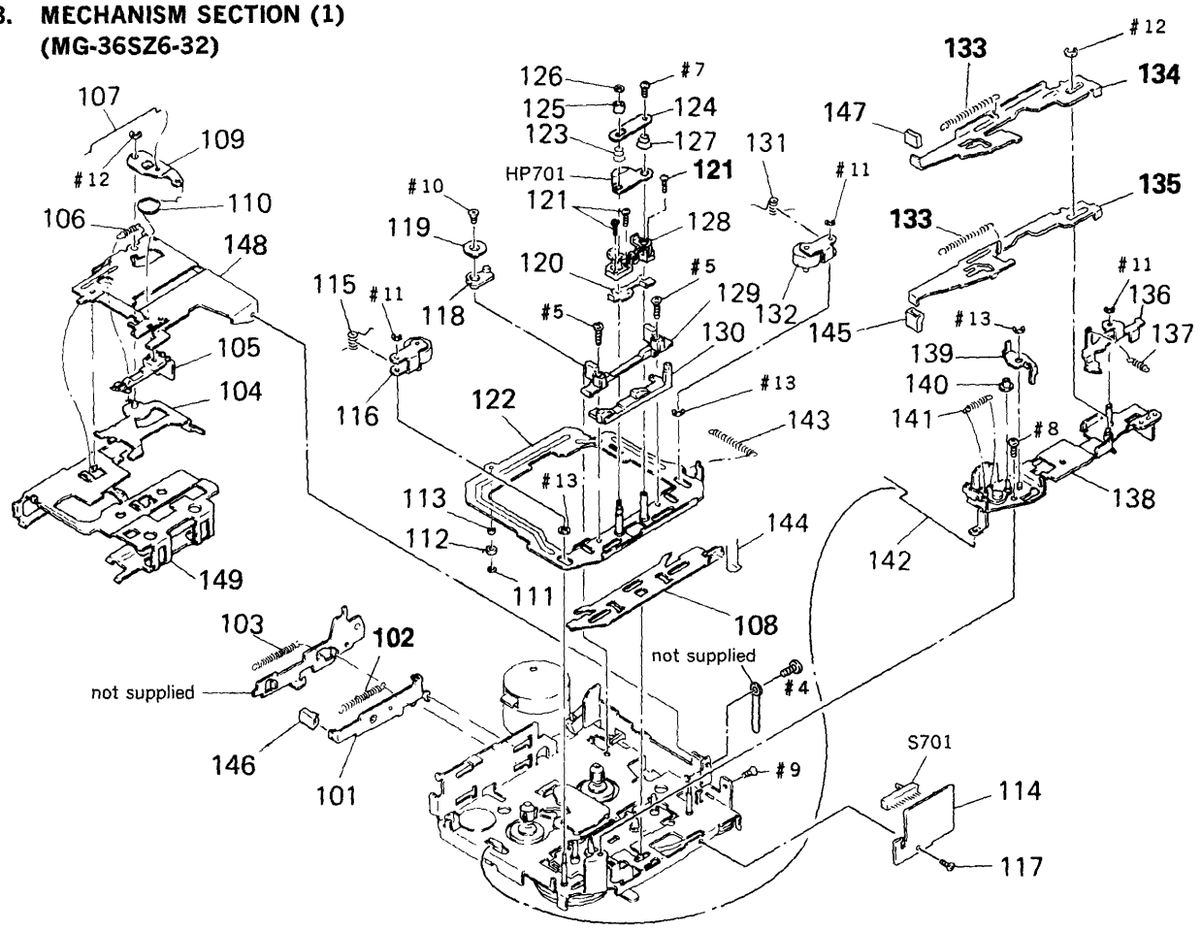
4-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-922-508-01	BUTTON (RELEASE)	
52	3-922-514-01	SPRING (RELEASE), COMPRESSION	
53	3-922-502-01	BUTTON (SEL)	
54	3-922-505-01	BUTTON (EJECT)	
55	3-922-513-01	SPRING (EJECT), COMPRESSION	
56	3-922-506-01	BUTTON (FF)	
57	3-375-372-01	SPRING (F/R)	
58	3-922-507-01	BUTTON (REW)	
59	3-922-503-01	BUTTON (SENS)	
60	3-922-498-01	PANEL, FRONT (EXCEPT 3501/3502, E)	
60	3-922-498-11	PANEL, FRONT (3501)	
60	3-922-498-21	PANEL, FRONT (3502)	
60	3-922-498-31	PANEL, FRONT (E)	

Ref. No.	Part No.	Description	Remark
61	3-922-504-01	BUTTON (OFF)	
62	3-922-501-01	BUTTON (1-6)	
* 63	3-922-510-01	PLATE (BUTTON), LIGHT GUIDE	
* 64	3-922-522-01	PLATE (LCD), GROUND	
* 65	3-922-511-01	REFLECTOR	
* 66	3-922-509-01	PLATE (LCD), LIGHT GUIDE	
67	3-922-499-01	PANEL, FRONT BACK	
* 68	3-922-523-01	PLATE (F/S), GROUND	
LCD900	1-810-848-11	DISPLAY PANEL, LIQUID CRYSTAL	

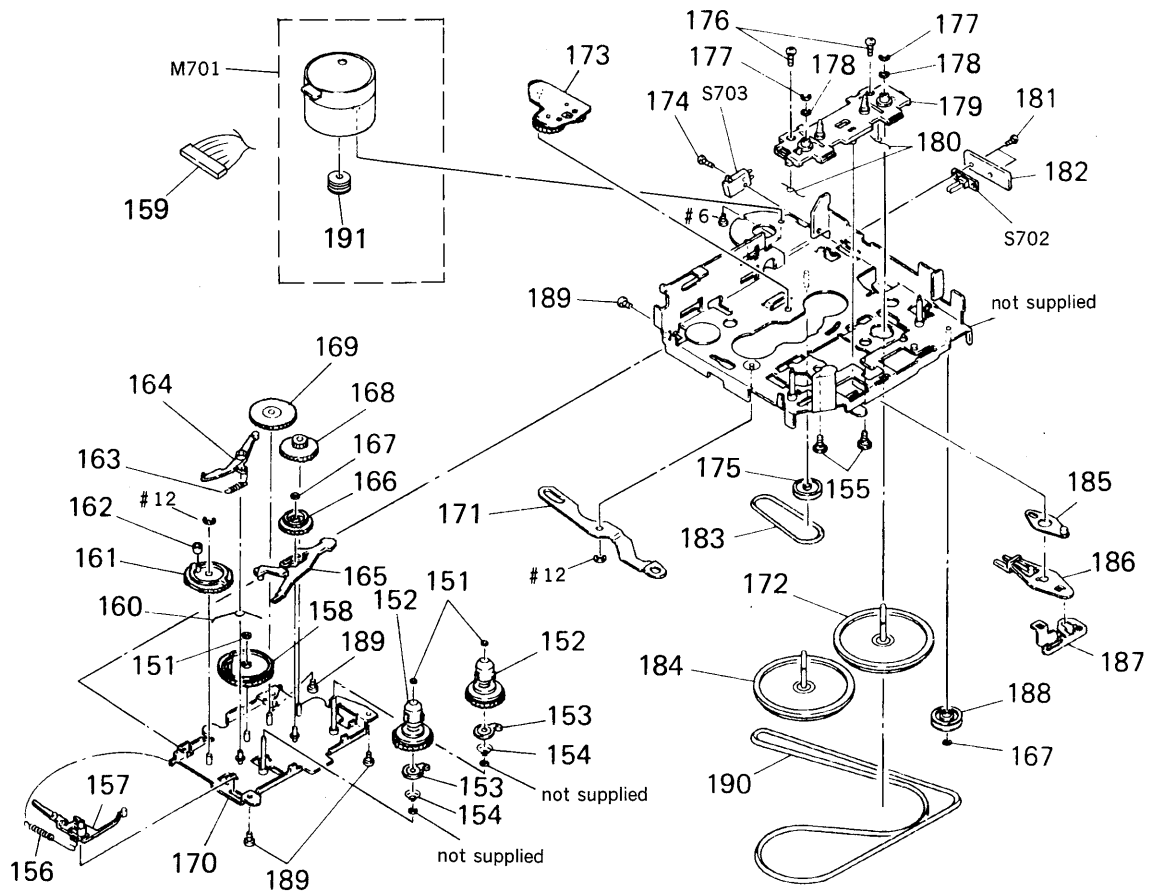
4-3. MECHANISM SECTION (1) (MG-36SZ6-32)



Ref. No.	Part No.	Description	Remark
* 101	3-379-144-01	LEVER (S), EJECT	
102	3-392-950-01	SPRING	
103	3-392-951-01	SPRING	
* 104	3-392-921-01	LOCK ASSY, EJECT CAM	
105	3-392-972-01	HOOKER, TAPE	
106	3-392-953-01	SPRING	
107	3-392-969-01	LINK, RETURN	
* 108	3-392-919-01	ARM ASSY, F, R SELECTION	
* 109	3-392-932-01	PLATE, CENTER	
110	3-392-961-01	SPRING (B)	
111	3-570-615-00	POLY-WASHER (DIA. 1.2)	
112	3-392-945-01	ROLLER (A), H.P	
113	3-392-942-01	ROLLER (B), H.P	
114	3-392-970-01	CHASSIS, SWITCH (DIRECTION SWITCH BOARD)	
115	3-392-958-01	SPRING (R)	
116	3-375-378-01	ARM (R) ASSY, PINCH	
* 117	4-908-792-11	SCREW (B2)	
118	3-372-244-01	ARM (N), MUTE	
* 119	3-397-427-01	COLLAR, MUTE ARM	
120	3-377-908-01	SHIM (X), ADJUSTOR	
121	3-375-379-01	SCREW, AZIMUTH	
* 122	3-392-975-05	PLATE ASSY (S), HEAD	
123	3-392-956-01	SPRING (A)	
* 124	3-392-930-01	RETAINER, SPRING	
125	3-392-943-01	ROLLER, FF	
126	3-676-387-00	POLY-SLIDER (DIA. 1.6)	

Ref. No.	Part No.	Description	Remark
127	3-392-955-01	SPRING (A)	
* 128	3-379-142-01	ARM (B), ADJUSTOR	
129	3-392-984-02	GUIDE, TAPE	
130	3-377-909-02	LINK (X), ADJUSTOR	
131	3-392-957-01	SPRING (F)	
132	3-375-377-01	ARM (F) ASSY, PINCH	
133	3-392-948-01	SPRING	
* 134	3-379-145-01	LEVER (S), FF	
* 135	3-379-146-01	LEVER (S), REW	
* 136	3-392-935-01	ARM, LOCK	
137	3-392-917-01	SPRING	
* 138	3-372-242-01	BRACKET ASSY (D), LEVER	
* 139	3-392-933-01	LEVER (B), CHANGE	
140	3-392-994-01	ROLLER, PROGRAM	
141	3-392-954-01	SPRING	
142	3-372-243-01	LINK (B), SELECTOR	
143	3-392-952-01	SPRING	
144	3-392-962-01	SPRING	
* 145	3-379-139-01	BUTTON, REW	
* 146	3-379-140-01	BUTTON, EJECT	
* 147	3-379-141-01	BUTTON, FF	
148	3-375-383-01	HANGER (X), CASSETTE	
149	3-375-384-01	HOLDER (X), CASSETTE	
HP701	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)	
S701	1-692-502-11	SWITCH, SLIDE (DIRECTION)	

4-4. MECHANISM SECTION (2)
(MG-36SZ6-32)



Ref. No.	Part No.	Description	Remark
151	3-676-387-00	POLY-SLIDER (DIA. 1. 6)	
152	3-376-196-01	SPINDLE ASSY (S), REEL	
153	3-375-380-01	CAM ASSY, DETECTION	
154	3-370-619-01	SPRING, BACK TENSION	
155	3-392-918-01	SCREW, EJECT HOOK	
156	3-392-959-01	SPRING	
157	3-392-985-02	RATCHET	
158	3-392-990-01	GEAR, DETECTION	
159	3-387-912-01	CONNECTOR ASSY, 11P	
160	3-392-960-01	SPRING	
161	3-392-987-01	GEAR, SELECTOR	
162	3-392-944-01	COLLAR (CELECTER GEAR)	
163	3-375-131-01	SPRING, GEAR LOCK ARM	
164	3-392-989-02	ARM, GEAR LOCK	
165	3-392-986-01	ARM, SENSOR	
166	3-392-915-01	GEAR, IDLE	
167	3-570-615-00	POLY-WASHER (DIA. 1. 2)	
168	3-392-936-01	GEAR (A)	
169	3-392-937-01	GEAR (B)	
* 170	3-392-976-01	BASE ASSY, REEL	
* 171	3-392-979-01	LEVER, REVERSE	
172	3-392-926-02	FLYWHEEL ASSY (BF)	

Ref. No.	Part No.	Description	Remark
173	3-392-916-01	ARM ASSY, TU GEAR	
174	3-318-203-11	SCREW (B1. 7X6), TAPPING	
175	3-392-938-01	GEAR, PULLY	
176	3-318-204-81	SCREW (M1. 7X3), TAPPING	
177	3-590-768-00	RING (A), E	
178	3-701-437-11	POLY-SLIDER (A)	
* 179	3-375-381-01	BRACKET ASSY (X), CM	
180	3-392-963-01	SPRING (R)	
181	3-318-204-91	SCREW (M1. 7X4), TAPPING	
182	3-375-376-01	MUTE (PWB) (MUTE SWITCH BOARD)	
183	3-375-375-02	BELT (C), SUB	
184	3-392-995-02	FLYWHEEL ASSY (BR)	
* 185	3-392-925-01	ARM (A) ASSY, F. R	
* 186	3-392-939-01	ARM, FF	
* 187	3-392-934-01	ARM (B), F. R	
188	3-392-941-01	PULLEY (A), IDLE	
* 189	4-908-792-11	SCREW (B2)	
190	3-392-967-01	BELT, MAIN	
* 191	3-392-913-01	PULLEY, MOTOR	
M701	X-3364-496-1	MOTOR ASSY (REEL/CAPSTAN)	
S702	1-692-065-11	SWITCH, LEAF (MUTE)	
S703	1-554-790-21	SWITCH, POWER (TAPE DET)	

ARI MAIN

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

- Abbreviation
  G : German model

Ref. No.	Part No.	Description			Remark
		ARI BOARD (INCLUDED IN MAIN BOARD, COMPLETE) (3502)			
		********			
		< CAPACITOR >			
C701-703	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V (3502)
C704	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (3502)
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
C707	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
C708	1-163-245-11	CERAMIC CHIP	56PF	5%	50V (3502)
C709	1-130-477-00	MYLAR	0.0033uF	5%	50V (3502)
C710	1-126-288-11	ELECT	4.7uF	20%	16V (3502)
C711	1-136-163-00	FILM	0.068uF	5%	50V (3502)
C712	1-136-163-00	FILM	0.068uF	5%	50V (3502)
C713	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
		< DIODE >			
D700	8-719-901-33	DIODE 1SS133 (3502)			
		< IC >			
IC700	8-759-998-24	IC TDA1579T (3502)			
		< RESISTOR >			
R702	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (3502)
R705	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (3502)
R706	1-208-849-11	METAL GLAZE	620K	5%	1/10W (3502)
R707	1-216-089-00	METAL CHIP	47K	5%	1/10W (3502)
R708	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (3502)
R709	1-216-093-11	METAL GLAZE	68K	5%	1/10W (3502)
R710	1-216-089-00	METAL CHIP	47K	5%	1/10W (3502)
R711	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W (3502)
R712	1-216-246-00	METAL GLAZE	100K	5%	1/8W (3502)
R713	1-216-117-00	METAL CHIP	680K	5%	1/10W (3502)
R714	1-216-105-00	METAL CHIP	220K	5%	1/10W (3502)
**********					
*	A-3222-910-A	MAIN BOARD, COMPLETE (US, Canadian)			
*	A-3222-911-A	MAIN BOARD, COMPLETE (AEP, UK)			
*	A-3222-912-A	MAIN BOARD, COMPLETE (3501)			
*	A-3222-913-A	MAIN BOARD, COMPLETE (INCLUDING ARI BOARD) (3502)			
*	A-3222-923-A	MAIN BOARD, COMPLETE (E)			
		**********			
	3-924-506-01	HOLDER (PCB) (3502)			
		< CAPACITOR >			
C1	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C2	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C3	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C4	1-124-584-00	ELECT	100uF	20%	10V
C5	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C7	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C50	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C51	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C52	1-124-589-11	ELECT	47uF	20%	16V
C53	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C54-56	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C57	1-124-589-11	ELECT	47uF	20%	16V
C58	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C59	1-124-257-00	ELECT	2.2uF	20%	50V
C60	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C61	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C62	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C63	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C64	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C65	1-164-232-11	CERAMIC CHIP	0.01uF		50V (3501)
C66	1-128-054-11	ELECT	22uF	20%	10V
C200	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (AEP, UK, G)

Ref. No.	Part No.	Description		Remark
C201	1-124-584-00	ELECT	100uF	20% 10V (AEP, UK, G)
C202	1-126-288-11	ELECT	4.7uF	20% 16V (AEP, UK, G)
C203	1-163-019-00	CERAMIC CHIP	0.0068uF	10% 50V (AEP, UK, G)
C204	1-163-113-00	CERAMIC CHIP	68PF	5% 50V (AEP, UK, G)
C205	1-163-010-11	CERAMIC CHIP	0.0012uF	10% 50V (AEP, UK, G)
C206	1-163-007-11	CERAMIC CHIP	680PF	10% 50V (AEP, UK, G)
C207	1-163-007-11	CERAMIC CHIP	680PF	10% 50V (AEP, UK, G)
C208	1-126-288-11	ELECT	4.7uF	20% 16V (AEP, UK, G)
C209-212	1-163-002-11	CERAMIC CHIP	270PF	10% 50V (AEP, UK, G)
C213	1-164-232-11	CERAMIC CHIP	0.01uF	50V (AEP, UK, G)
C214	1-164-232-11	CERAMIC CHIP	0.01uF	50V (AEP, UK, G)
C215	1-124-464-11	ELECT	0.22uF	20% 50V (AEP, UK, G)
C250	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C251	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V
C252	1-163-227-11	CERAMIC CHIP	10PF	0.5PF 50V (3501)
C253	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C256	1-128-054-11	ELECT	22uF	20% 10V
C257	1-126-301-11	ELECT	1uF	20% 50V
C258	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C259	1-126-162-11	ELECT	3.3uF	20% 50V
C260	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C261	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C262	1-126-157-11	ELECT	10uF	20% 16V
C263	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C264	1-124-584-00	ELECT	100uF	20% 10V
C265	1-126-162-11	ELECT	3.3uF	20% 50V
C266	1-163-005-11	CERAMIC CHIP	470PF	10% 50V
C267	1-163-222-11	CERAMIC CHIP	5PF	0.5PF 50V
C268	1-163-123-00	CERAMIC CHIP	180PF	5% 50V (3501)
C269	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C270	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V (3501)
C271	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C272	1-126-159-11	ELECT	0.47uF	20% 50V
C273	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C274	1-164-182-11	CERAMIC CHIP	0.0033uF	10% 50V

Ref. No.	Part No.	Description		Remark
C275	1-126-301-11	ELECT	1uF	20% 50V
C276	1-163-251-11	CERAMIC CHIP	100PF	5% 50V
C277	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V
C278	1-126-301-11	ELECT	1uF	20% 50V
C279	1-163-023-00	CERAMIC CHIP	0.015uF	5% 50V
C280	1-163-023-00	CERAMIC CHIP	0.015uF	5% 50V
C281	1-104-760-11	CERAMIC CHIP	0.047uF	10% 50V
C282	1-163-007-11	CERAMIC CHIP	680PF	10% 50V
C283	1-124-463-00	ELECT	0.1uF	20% 50V
C284	1-163-011-11	CERAMIC CHIP	0.0015uF	10% 50V (US, Canadian, E)
C284	1-163-121-00	CERAMIC CHIP	150PF	5% 50V (AEP, UK, G)
C285	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V
C286	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V (US, Canadian)
C286	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V (AEP, UK, E, G)
C287	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V (US, Canadian)
C287	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V (AEP, UK, E, G)
C288	1-126-157-11	ELECT	10uF	20% 16V (2012)
C289	1-216-295-00	CONDUCTOR, CHIP		
C290	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C291	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C292	1-163-227-11	CERAMIC CHIP	10PF	0.5PF 50V
C293	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V (3501)
C294	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V
C295	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C296	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V
C297	1-163-113-00	CERAMIC CHIP	68PF	5% 50V (3501)
C297	1-216-295-00	CONDUCTOR, CHIP		(2012) (3500/3502)
C298	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C350	1-163-005-11	CERAMIC CHIP	470PF	10% 50V
C351	1-163-007-11	CERAMIC CHIP	680PF	10% 50V
C352	1-126-154-11	ELECT	47uF	20% 6.3V
C353	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C354	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C355	1-126-154-11	ELECT	47uF	20% 6.3V
C356	1-163-007-11	CERAMIC CHIP	680PF	10% 50V
C357	1-124-229-00	ELECT	33uF	20% 10V
C450	1-124-584-00	ELECT	100uF	20% 10V
C451	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C452	1-124-229-00	ELECT	33uF	20% 10V
C454	1-163-243-11	CERAMIC CHIP	47PF	5% 50V
C455	1-128-054-11	ELECT	22uF	20% 10V
C456	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V

MAIN

Ref. No.	Part No.	Description			Remark
C457	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C458	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C459	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C462	1-126-301-11	ELECT	1uF	20%	50V
C464	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C465	1-128-054-11	ELECT	22uF	20%	10V
C466	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C467	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C468	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C469	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C472-474					
	1-126-301-11	ELECT	1uF	20%	50V
C500-503					
	1-126-301-11	ELECT	1uF	20%	50V
C504	1-126-157-11	ELECT	10uF	20%	16V
C505	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C506-509					
	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C510	1-126-157-11	ELECT	10uF	20%	16V
C511-514					
	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C515-522					
	1-136-165-00	FILM	0.1uF	5%	50V
C523	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
				(US, Canadian, E)	
C524	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
				(US, Canadian, E)	
C525	1-126-157-11	ELECT	10uF	20%	16V
C526	1-124-229-00	ELECT	33uF	20%	10V
C527	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C601	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C602	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C603	1-136-169-00	FILM	0.22uF	5%	50V
C604	1-126-936-11	ELECT	3300uF	20%	16V
C605-607					
	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C608	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C609	1-124-584-00	ELECT	100uF	20%	10V
C610	1-126-157-11	ELECT	10uF	20%	16V
C611	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C612	1-124-584-00	ELECT	100uF	20%	10V
C613	1-126-157-11	ELECT	10uF	20%	16V
C614	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C615	1-136-165-00	FILM	0.1uF	5%	50V
C616	1-128-134-11	ELECT	100uF	20%	16V
C617	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C618	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C619	1-126-301-11	ELECT	1uF	20%	50V
C620	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No.	Part No.	Description			Remark
C700	1-128-054-11	ELECT	22uF	20%	10V (3502)
		< CONNECTOR >			
CN901	1-764-425-11	JACK (ANTENNA)			
* CN902	1-506-993-11	PIN, CONNECTOR (PC BOARD) 11P			BOARD
CN903	1-764-424-41	JACK, PIN 2P (LINE OUT) (US, Canadian, E)			
CN904	1-770-486-11	CONNECTOR (POWER) 16P			
CN905	1-770-445-11	SOCKET, CONNECTOR 12P			
		< FILTER >			
CF250	1-579-890-11	FILTER, CERAMIC (50Hz)			
CF251	1-760-553-11	FILTER, CERAMIC			
		< TRIMMER >			
CT250-252					
	1-141-245-00	CAP, TRIMMER	30PF		
		< DIODE >			
D1	8-719-901-33	DIODE	1SS133 (3501)		
D2	8-719-901-33	DIODE	1SS133 (AEP, UK, E)		
D3	8-719-901-33	DIODE	1SS133		
D4	8-719-109-93	DIODE	RD6.2ESB2		
D5	8-719-109-93	DIODE	RD6.2ESB2		
D6	8-719-109-93	DIODE	RD6.2ESB2		
D7	8-719-109-93	DIODE	RD6.2ESB2 (3500/3501)		
D8	8-719-109-93	DIODE	RD6.2ESB2		
D9	8-719-109-93	DIODE	RD6.2ESB2		
D10	8-719-109-93	DIODE	RD6.2ESB2		
D11	8-719-109-93	DIODE	RD6.2ESB2		
D12	8-719-109-93	DIODE	RD6.2ESB2		
D51	8-719-901-33	DIODE	1SS133		
D52	8-719-901-33	DIODE	1SS133		
D250	8-719-049-16	DIODE	1SV234		
D251	8-719-053-81	DIODE	SVC354S		
D252	8-719-901-33	DIODE	1SS133 (3501)		
D253	8-719-109-62	DIODE	RD3.0ES-B1		
D255	8-719-901-33	DIODE	1SS133		
D350	8-719-984-80	DIODE	1SR139-200		
D500	8-719-914-43	DIODE	DAN202K		
D600	8-719-049-38	DIODE	1N5404TU		
D601	8-719-901-33	DIODE	1SS133		
D602	8-719-109-90	DIODE	RD5.6ESB3		
D603	8-719-110-14	DIODE	RD9.1ESB3		
D604	8-719-901-33	DIODE	1SS133		
D605	8-719-984-80	DIODE	1SR139-200		
D606	8-719-901-33	DIODE	1SS133		
D607	8-719-921-63	DIODE	MTZJ-7.5B		
D608	8-719-901-33	DIODE	1SS133		

Ref. No.	Part No.	Description	Remark
		< IC >	
IC1	8-759-346-11	IC LC7233N-8946 (3500/3501)	
IC1	8-759-346-12	IC LC7233N-8942 (3502)	
IC200	8-759-801-94	IC LA2113 (AEP, UK, G)	
IC250	8-759-261-38	IC LA1875M-TP-T1	
IC350	8-759-924-46	IC BA4560F	
IC450	8-759-330-62	IC LC75383ED	
IC500	8-759-279-87	IC HA13151A	
		< JUMPER RESISTOR >	
JR1	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR2	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR3	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR4	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR5	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR6	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR7	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR8	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR9	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR10	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR11	1-216-296-00	CONDUCTOR, CHIP (3216)	(AEP, UK, G)
JR12	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR13	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR14	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR16	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR18-21	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR22	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR23	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR24	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR25	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR27	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR29-31	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR32	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR33	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR34	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR35	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR36-39	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR41	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR42	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR44	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-410-513-11	INDUCTOR 22uH	
L50	1-410-513-11	INDUCTOR 22uH	
L51	1-410-503-11	INDUCTOR 3.3uH	
L250	1-410-513-11	INDUCTOR 22uH	
L251	1-411-244-11	COIL (LW OSC) (3501)	
L252	1-411-243-11	COIL (AM OSC)	
L253	1-408-405-00	INDUCTOR 4.7uH	
L700	1-424-036-11	COIL (FILTER) (3502)	
		< TRANSISTOR >	
Q1	8-729-901-01	TRANSISTOR DTC144EK	
Q2	8-729-901-01	TRANSISTOR DTC144EK	
Q3	8-729-901-01	TRANSISTOR DTC144EK	
Q50	8-729-902-99	TRANSISTOR DTC114TK	
Q51	8-729-902-99	TRANSISTOR DTC114TK	
Q52	8-729-931-02	TRANSISTOR 2SC2413KQ	
Q53	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q54	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q55	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q56	8-729-900-53	TRANSISTOR DTC114EK	
Q57	8-729-901-00	TRANSISTOR DTC124EK	
Q58	8-729-901-05	TRANSISTOR DTA124EK	
Q59	8-729-900-53	TRANSISTOR DTC114EK	
Q60	8-729-901-01	TRANSISTOR DTC144EK (3501)	
Q61	8-729-901-00	TRANSISTOR DTC124EK (3501)	
Q250	8-729-012-35	TRANSISTOR 2SK711-BL	
Q251	8-729-931-02	TRANSISTOR 2SC2413KQ	
Q252	8-729-032-50	TRANSISTOR 2SC4018K-N (3501)	
Q253	8-729-032-50	TRANSISTOR 2SC4018K-N (3501)	
Q254	8-729-012-35	TRANSISTOR 2SK711-BL	
Q255	8-729-902-99	TRANSISTOR DTC114TK (3501)	
Q256	8-729-902-99	TRANSISTOR DTC114TK (3501)	
Q257	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q258	8-729-901-01	TRANSISTOR DTC144EK	
Q259	8-729-901-01	TRANSISTOR DTC144EK	
Q260	8-729-900-53	TRANSISTOR DTC114EK	
Q261	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q262	8-729-216-22	TRANSISTOR 2SA1162-G (3501)	
Q350	8-729-205-94	TRANSISTOR 2SA1428-O	
Q351	8-729-900-53	TRANSISTOR DTC114EK	
Q500	8-729-920-21	TRANSISTOR DTC314TKH04	
Q501	8-729-920-21	TRANSISTOR DTC314TKH04	
Q502	8-729-920-21	TRANSISTOR DTC314TKH04	
Q503	8-729-920-21	TRANSISTOR DTC314TKH04	
Q504	8-729-900-51	TRANSISTOR DTA114TK	
Q505	8-729-901-00	TRANSISTOR DTC124EK	
Q506	8-729-216-22	TRANSISTOR 2SA1162-G	
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q600	8-729-205-97	TRANSISTOR 2SC3668-Y	
Q601	8-729-209-15	TRANSISTOR 2SD2012	
Q602	8-729-901-04	TRANSISTOR DTA114EK	
Q603	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q604	8-729-900-53	TRANSISTOR DTC114EK	

MAIN

Ref. No.	Part No.	Description			Remark
Q605	8-729-205-94	TRANSISTOR	2SA1428-O		
Q606	8-729-216-22	TRANSISTOR	2SA1162-G		
Q607	8-729-902-99	TRANSISTOR	DTC114TK		
Q608	8-729-902-99	TRANSISTOR	DTC114TK		
Q609	8-729-901-97	TRANSISTOR	2SA1036K-Q		
Q610	8-729-901-04	TRANSISTOR	DTA114EK		
Q611	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R3	1-247-895-00	CARBON	470K	5%	1/4W
R4	1-216-097-00	METAL CHIP	100K	5%	1/10W
R5	1-247-879-11	CARBON	100K	5%	1/4W (3500/3501)
R6	1-216-097-00	METAL CHIP	100K	5%	1/10W
R7	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8	1-216-085-00	METAL CHIP	33K	5%	1/10W
R9-13	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R14	1-249-417-11	CARBON	1K	5%	1/4W
R15	1-249-417-11	CARBON	1K	5%	1/4W
R16	1-216-097-00	METAL CHIP	100K	5%	1/10W
R17	1-216-097-00	METAL CHIP	100K	5%	1/10W
R18-20	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R21	1-249-417-11	CARBON	1K	5%	1/4W
R22	1-249-417-11	CARBON	1K	5%	1/4W (3500/3501)
R23	1-249-417-11	CARBON	1K	5%	1/4W
R24	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R25	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R26-28	1-216-198-00	METAL CHIP	1K	5%	1/8W
R29	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R30	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R31	1-208-806-11	METAL GLAZE	10K	5%	1/10W
R32	1-249-417-11	CARBON	1K	5%	1/4W
R33-38	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R39	1-216-113-00	METAL CHIP	470K	5%	1/10W
R40	1-216-295-00	CONDUCTOR, CHIP		(2012)	(AEP, UK)
R41	1-216-097-00	METAL CHIP	100K	5%	1/10W
R42	1-216-075-00	METAL CHIP	12K	5%	1/10W
R50	1-216-025-00	METAL CHIP	100	5%	1/10W
R51	1-216-198-00	METAL CHIP	1K	5%	1/8W
R53	1-216-089-00	METAL CHIP	47K	5%	1/10W
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W
R55	1-216-039-00	METAL CHIP	390	5%	1/10W
R56	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R57	1-219-029-00	METAL CHIP	100	5%	1/10W
R58	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R59	1-216-188-00	METAL GLAZE	390	5%	1/8W
R60	1-249-417-11	CARBON	1K	5%	1/4W
R61	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R62	1-216-043-00	METAL CHIP	560	5%	1/10W
R63	1-216-073-00	METAL CHIP	10K	5%	1/10W
R64	1-216-073-00	METAL CHIP	10K	5%	1/10W
R65	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R66	1-216-073-00	METAL CHIP	10K	5%	1/10W
R67	1-216-081-00	METAL CHIP	22K	5%	1/10W
R68	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (3501)
R68	1-216-296-00	CONDUCTOR, CHIP		(3216)	(3500/3502)
R70	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (3501)
R73	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W
R74	1-216-073-00	METAL CHIP	10K	5%	1/10W
R200	1-216-150-00	METAL GLAZE	10	5%	1/8W (AEP, UK, G)
R201	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W (AEP, UK, G)
R202-205	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (AEP, UK, G)
R206	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (AEP, UK, G)
R207	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (AEP, UK, G)
R208	1-216-059-00	METAL CHIP	2.7K	5%	1/10W (AEP, UK, G)
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W (AEP, UK, G)
R210	1-216-047-00	METAL CHIP	820	5%	1/10W (AEP, UK, G)
R211	1-216-089-00	METAL CHIP	47K	5%	1/10W (AEP, UK, G)
R212	1-216-246-00	METAL GLAZE	100K	5%	1/8W (AEP, UK, G)
R251	1-216-097-00	METAL CHIP	100K	5%	1/10W
R252	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (3501)
R253	1-216-295-00	CONDUCTOR, CHIP		(2012)	(3500/3502)
R254	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (3501)
R255	1-216-121-00	METAL CHIP	1M	5%	1/10W
R256	1-216-295-00	CONDUCTOR, CHIP		(2012)	(3500/3502)
R257	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R258	1-216-073-00	METAL CHIP	10K	5%	1/10W
R259	1-216-025-00	METAL CHIP	100	5%	1/10W
R260	1-216-097-00	METAL CHIP	100K	5%	1/10W
R261	1-216-097-00	METAL CHIP	100K	5%	1/10W (3501)

Ref. No.	Part No.	Description			Remark
R261	1-216-295-00	CONDUCTOR, CHIP			(2012)
					(3500, 3502)
R262	1-216-097-00	METAL CHIP	100K	5%	1/10W
R263	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R264	1-216-101-00	METAL CHIP	150K	5%	1/10W (3501)
R265	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R266	1-249-423-11	CARBON	3.3K	5%	1/4W
R267	1-249-423-11	CARBON	3.3K	5%	1/4W
R268	1-216-295-00	CONDUCTOR, CHIP			(2012)
					(US, Canadian, E)
R269	1-216-089-00	METAL CHIP	47K	5%	1/10W
					(AEP, UK, 3501)
R269	1-216-093-11	METAL GLAZE	68K	5%	1/10W (E)
R269	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R269	1-216-101-00	METAL CHIP	150K	5%	1/10W
					(US, Canadian)
R271	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R272	1-216-097-00	METAL CHIP	100K	5%	1/10W
R273	1-216-234-00	METAL GLAZE	33K	5%	1/8W
R275	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R276	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(US, Canadian)
R276	1-216-079-00	METAL CHIP	18K	5%	1/10W
					(AEP, UK, 3501)
R276	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(US, Canadian)
R277	1-216-079-00	METAL CHIP	18K	5%	1/10W
					(AEP, UK, 3501)
R277	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R278	1-216-073-00	METAL CHIP	10K	5%	1/10W
R279	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R282	1-216-107-00	METAL CHIP	270K	5%	1/10W
R283	1-216-097-00	METAL CHIP	100K	5%	1/10W (3501)
R284	1-216-089-00	METAL CHIP	47K	5%	1/10W (3501)
R285	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R286	1-247-860-11	CARBON	16K	5%	1/4W
					(AEP, UK, G)
R286	1-249-430-11	CARBON	12K	5%	1/4W
					(US, Canadian, E)
R287	1-216-089-00	CARBON	47K	5%	1/10W (3501)
R350	1-249-418-11	CARBON	1.2K	5%	1/4W
R352	1-216-073-00	METAL CHIP	10K	5%	1/10W
R353	1-216-089-00	METAL CHIP	47K	5%	1/10W
R354	1-216-164-00	METAL GLAZE	39	5%	1/8W
					(3500/3501)
R354	1-216-166-00	METAL GLAZE	47	5%	1/8W (3502)
R355	1-216-077-00	METAL CHIP	15K	5%	1/10W
R356	1-216-115-00	METAL CHIP	560K	5%	1/10W
R357	1-247-855-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R358	1-247-855-11	CARBON	10K	5%	1/4W
R359	1-216-025-00	METAL CHIP	100	5%	1/10W
R360	1-216-115-00	METAL CHIP	560K	5%	1/10W
R361	1-216-077-00	METAL CHIP	15K	5%	1/10W
R362	1-216-015-00	METAL CHIP	39	5%	1/10W
					(3500/3501)
R362	1-216-017-00	METAL CHIP	47	5%	1/10W (3502)
R363	1-216-089-00	METAL CHIP	47K	5%	1/10W
R450	1-216-150-00	METAL GLAZE	10	5%	1/8W
R451	1-216-097-00	METAL CHIP	100K	5%	1/10W
R452	1-216-097-00	METAL CHIP	100K	5%	1/10W
R500-503	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504-507	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R508	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R508	1-216-075-00	METAL CHIP	12K	5%	1/10W
					(3500/3501)
R509	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R509	1-216-075-00	METAL CHIP	12K	5%	1/10W
					(3500/3501)
R510	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R510	1-216-075-00	METAL CHIP	12K	5%	1/10W
					(3500/3501)
R511	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R511	1-216-075-00	METAL CHIP	12K	5%	1/10W
					(3500/3501)
R512-515	1-216-077-00	METAL CHIP	15K	5%	1/10W
R516-519	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R520	1-249-423-11	CARBON	3.3K	5%	1/4W
R521	1-216-073-00	METAL CHIP	10K	5%	1/10W
R522	1-216-073-00	METAL CHIP	10K	5%	1/10W
R523-530	1-249-385-11	CARBON	2.2	5%	1/6W
R531	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R532	1-216-091-00	METAL CHIP	56K	5%	1/10W
R533	1-216-105-00	METAL CHIP	220K	5%	1/10W
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W
R535	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R536	1-216-295-00	CONDUCTOR, CHIP			(2012)
					(US, Canadian, E)
R537	1-216-295-00	CONDUCTOR, CHIP			(2012)
					(US, Canadian, E)
R600	1-216-073-00	METAL CHIP	10K	5%	1/10W
R601	1-249-428-11	CARBON	8.2K	5%	1/4W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-247-807-11	CARBON	100	5%	1/4W
R604	1-216-041-11	METAL GLAZE	470	5%	1/10W
R605	1-216-373-11	METAL GLAZE	2.2	5%	2W

MAIN **SUB** **SWITCH**

Ref.No.	Part No.	Description			Remark
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W
R607	1-249-417-11	CARBON	1K	5%	1/4W
R608	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R609	1-216-073-00	METAL CHIP	10K	5%	1/10W
R610	1-249-417-11	CARBON	1K	5%	1/4W
R611	1-216-357-00	METAL GLAZE	4.7	5%	1W
R612	1-216-144-11	METAL CHIP	5.6	5%	1/8W
R613	1-216-081-00	METAL CHIP	22K	5%	1/10W
R614	1-216-093-11	METAL GLAZE	68K	5%	1/10W
R615	1-216-081-00	METAL CHIP	22K	5%	1/10W
R616	1-216-081-00	METAL CHIP	22K	5%	1/10W
R617	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-216-073-00	METAL CHIP	10K	5%	1/10W
R700	1-249-401-11	CARBON	47	5%	1/4W (3502)
R701	1-216-041-11	METAL GLAZE	470	5%	1/10W (3502)
R703	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (3502)
R704	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (3502)
		< VARIABLE RESISTOR >			
RV251	1-241-689-11	RES, ADJ, CARBON 22K			
RV252	1-241-762-11	RES, ADJ, CARBON 2.2K			
RV253	1-223-927-11	RES, ADJ, CARBON 330K			
RV700	1-241-759-21	RES, ADJ, CARBON 220 (3502)			
		< SWITCH >			
S916		SWITCH, SLIDE (9K/10K) (E)			
		< COIL >			
T250	1-411-239-11	COIL (AM ANT) (3500/3502)			
T250	1-411-240-11	COIL (LW ANT) (3501)			
T251	1-411-240-11	COIL (LW ANT) (3501)			
T252	1-411-239-11	COIL (AM ANT)			
T253	1-411-240-11	COIL (LW ANT) (3501)			
T254	1-411-246-11	COIL (AM IFT)			
T255	1-411-245-11	COIL (FM IFT)			
		< TUNER >			
TU901	1-693-285-11	TUNER, FM			
		< VIBRATOR >			
X1	1-567-713-11	VIBRATOR, CRYSTAL (4.5MHz)			
X250		(456kHz)			

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Ref.No.	Part No.	Description			Remark
*	1-657-757-11	SUB BOARD (3502)			
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		< CAPACITOR >			
C801	1-128-022-11	ELECT	22uF		6.3V (3502)
C802	1-126-591-11	ELECT	10uF	20%	6.3V (3502)
		< DIODE >			
D7	8-719-105-99	DIODE RD6.2M-B1 (3502)			
		< TRANSISTOR >			
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (3502)			
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (3502)			
Q803	8-729-216-22	TRANSISTOR 2SA1162-G (3502)			
		< RESISTOR >			
R5	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R22	1-216-049-11	METAL GLAZE	1K	5%	1/10W (3502)
R801	1-216-077-00	METAL CHIP	15K	5%	1/10W (3502)
R802	1-216-063-00	METAL CHIP	3.9K	5%	1/10W (3502)
R803	1-216-093-11	METAL GLAZE	68K	5%	1/10W (3502)
R804	1-216-095-00	METAL GLAZE	82K	5%	1/10W (3502)
R805	1-216-051-00	METAL CHIP	1.2K	5%	1/10W (3502)
R806	1-216-091-00	METAL CHIP	56K	5%	1/10W (3502)
R807	1-216-109-11	METAL CHIP	330K	5%	1/10W (3502)

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SWITCH BOARD

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*	3-922-509-01	PLATE (LCD), LIGHT GUIDE			
*	3-922-511-01	REFLECTOR			
*	3-922-522-01	PLATE (LCD), GROUND			
		< CAPACITOR >			
C901	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C902	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C903	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C904	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C905	1-162-637-11	CERAMIC CHIP	0.47uF		16V
		< CONNECTOR >			
CN906	1-770-444-11	PIN, CONNECTOR 12P			
		< DIODE >			
D900	8-719-977-03	DIODE DTZ5.6B			
D901	8-719-105-99	DIODE RD6.2M-B1			
D902	8-719-105-99	DIODE RD6.2M-B1			

Ref. No.	Part No.	Description			Remark
D903	8-719-105-99	DIODE RD6.2M-B1			
D904	8-719-988-62	DIODE 1SS355			
		< IC >			
IC900	8-759-341-77	IC LC75822E			
		< JUMPER RESISTOR >			
JR902-904					
	1-216-296-00	CONDUCTOR, CHIP		(3216)	
JR905	1-216-146-00	METAL CHIP	6.8	5%	1/8W
JR906-910					
	1-216-296-00	CONDUCTOR, CHIP		(3216)	
JR911	1-216-295-00	CONDUCTOR, CHIP		(2012)	
		< LIQUID CRYSTAL DISPLAY >			
LCD900	1-810-848-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< PILOT LAMP >			
PL900-903					
	1-517-156-11	LAMP, PILOT (AMBER)			
PL900-903					
	1-517-156-51	LAMP, PILOT (GREEN)			
		< RESISTOR >			
R901	1-216-091-00	METAL CHIP	56K	5%	1/10W
R902	1-216-113-00	METAL CHIP	470K	5%	1/10W
R903	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R905	1-216-664-11	METAL CHIP	3.6K	0.5%	1/10W
R906	1-216-664-11	METAL CHIP	3.6K	0.5%	1/10W
R907	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R908	1-216-656-11	METAL CHIP	1.6K	0.5%	1/10W
		< SWITCH >			
S900	1-572-704-21	SWITCH, KEY BOARD (TUNER/A.MEM)			
S901	1-572-704-21	SWITCH, KEY BOARD (SEL)			
S902	1-572-704-21	SWITCH, KEY BOARD (+ (VOL))			
S903	1-572-704-21	SWITCH, KEY BOARD (- (VOL))			
S904	1-572-704-21	SWITCH, KEY BOARD (DSPL)			
S905	1-572-704-21	SWITCH, KEY BOARD (- (SEEK/MANU)			
S906	1-572-704-21	SWITCH, KEY BOARD (1/ATA)			
S907	1-572-704-21	SWITCH, KEY BOARD (2)			
S908	1-572-704-21	SWITCH, KEY BOARD (3)			
S909	1-572-704-21	SWITCH, KEY BOARD (4)			
S910	1-572-704-21	SWITCH, KEY BOARD (6)			
S911	1-572-704-21	SWITCH, KEY BOARD (SDK)			
S912	1-572-704-21	SWITCH, KEY BOARD (5)			
S913	1-572-704-21	SWITCH, KEY BOARD (SENS/LOUD)			
S914	1-572-704-21	SWITCH, KEY BOARD (OFF)			
S915	1-572-704-21	SWITCH, KEY BOARD (+ (SEEK/MANU))			

****

MISCELLANEOUS

****

14	1-769-625-11	CORD (WITH CONNECTOR) (US, Canadian, E)			
14	1-769-625-21	CORD (WITH CONNECTOR) (AEP, UK, G)			
F901		FUSE (12A/125V)			
F902	1-532-351-XX	FUSE (1A)			
HP701	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)			
M701	X-3364-496-1	MOTOR ASSY (REEL/CAPSTAN)			
S701	1-692-502-11	SWITCH, SLIDE (DIRECTION)			
S702	1-692-065-11	SWITCH, LEAF (MUTE)			
S703	1-554-790-21	SWITCH, POWER (TAPE DET)			

****

ACCESSORIES & PACKING MATERIALS

****

	3-798-788-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, DUTCH, ITALIAN) (AEP, UK, 3501)			
	3-798-788-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (US, Canadian)			
	3-798-788-41	MANUAL, INSTRUCTION (SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)			
	3-798-788-51	MANUAL, INSTRUCTION (ENGLISH, SPANISH, PORTUGUESE, CHINESE) (E)			
	3-798-788-71	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN) (3502)			
	3-798-789-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN) (AEP, UK, G)			
	3-798-789-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (US, Canadian)			
	3-798-789-41	MANUAL, INSTRUCTION, INSTALL (SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)			
	3-798-789-51	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, PORTUGUESE, CHINESE) (E)			
	X-3367-692-1	CASE ASSY			

****

Ref. No.	Part No.	Description	Remark

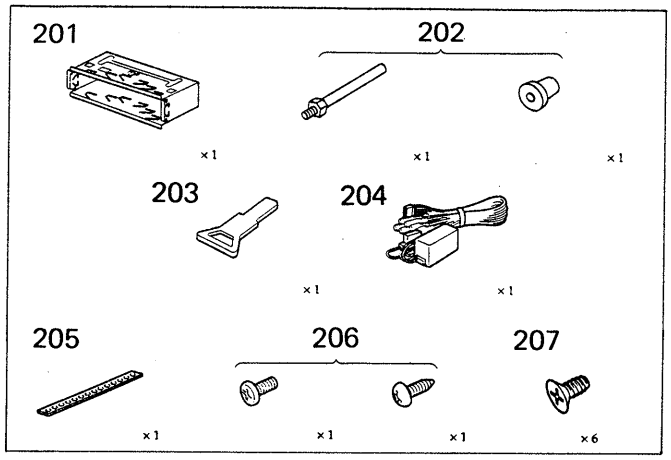
****
HARDWARE LIST
****

#1	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT
#2	7-621-772-10	SCREW +B 2X4
#3	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#4	7-621-775-08	SCREW +P 2.6X3
#5	7-627-553-88	SCREW, PRECISION +P 2X7
#6	7-621-255-15	SCREW +P 2X3
#7	7-621-255-20	SCREW +P 2X4
#8	7-621-255-25	SCREW +PTT 2X4 (S)
#9	7-621-555-10	SCREW +K 2X3
#10	7-621-591-00	SCREW +K 2X4
#11	7-624-102-04	STOP RING 1.5, TYPE -E
#12	7-624-104-04	STOP RING 2.0, TYPE -E
#13	7-624-118-01	RING, RETAINING E-2.5
#14	7-621-773-95	SCREW +B2.6X6

****

MOUNTING HARDWARE
****

201	X-3367-691-1	FRAME ASSY, FITTING
202	X-3366-405-1	SCREW ASSY (EXP), FITTING (AEP, UK, G)
203	3-909-097-01	KEY
204	1-769-625-11	CORD (WITH CONNECTOR) (US, Canadian, E)
204	1-769-625-21	CORD (WITH CONNECTOR) (AEP, UK, G)
205	3-310-655-01	SUPPORT (ND), FITTING (US, Canadian)
206	X-3368-725-1	SCREW ASSY, FITTING (US, Canadian, E)
207	3-916-830-01	SCREW (5X8) (TP), +K



XR-3500/3501/3502

SONY®
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
XR-3500
German Model
XR-3501/3502

SUPPLEMENT-1

File this supplement with the service manual.

Subject :

1. ~~Correction~~ (Revised)
2. Adjustments
3. Change the PC Boards

1. CORRECTION

Revised

2. ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	40—75g•cm (0.56—1.04oz•inch)
FWD Back Tension		1—5g•cm (0.01—0.06oz•inch)
REV	CQ-102RC	40—75g•cm (0.56—1.04oz•inch)
REV Back Tension		1—5g•cm (0.01—0.06oz•inch)
FF, REW	CQ-201B	45—150g•cm (0.63—2.08oz•inch)

2-2. ELECTRICAL ADJUSTMENTS

DECK SECTION | **0dB=0.775V**

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

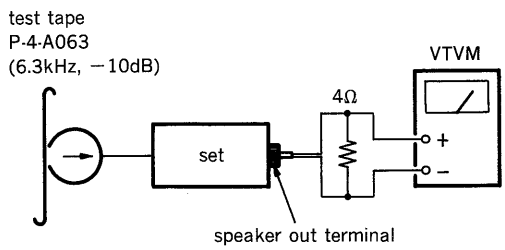
Test Tape

Type	Signal	Used for
P-4-A063	6.3kHz, −10dB	head azimuth adjustment
WS-48A	3kHz, 0dB	tape speed adjustment

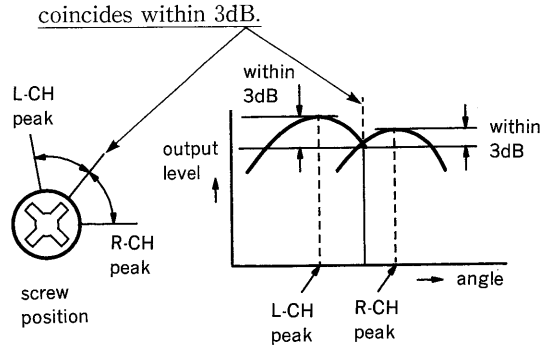
PB Head Azimuth Adjustment

Procedure:

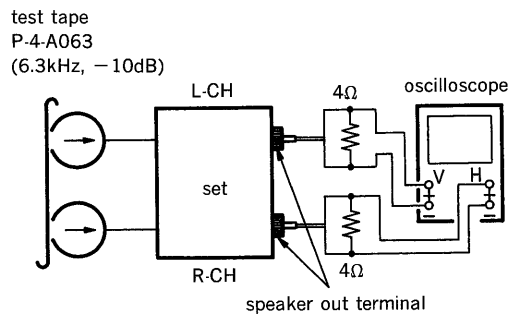
1. Mode: playback

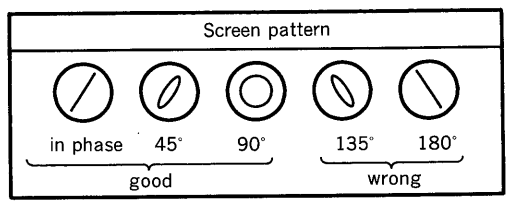


2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 3dB.



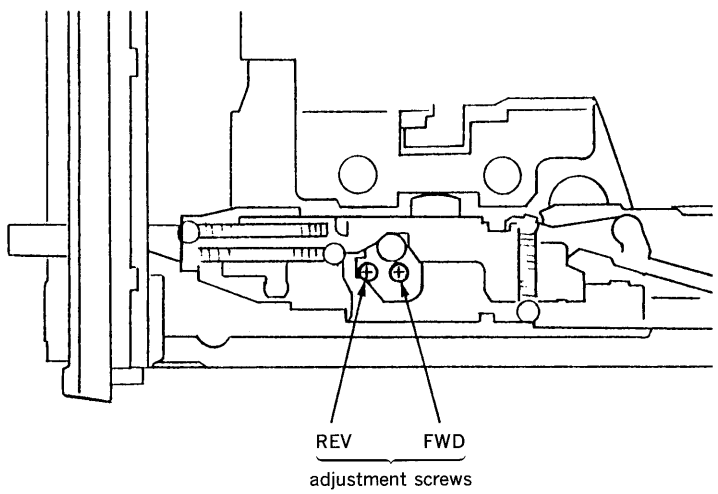
3. Check the phase in the PB mode.





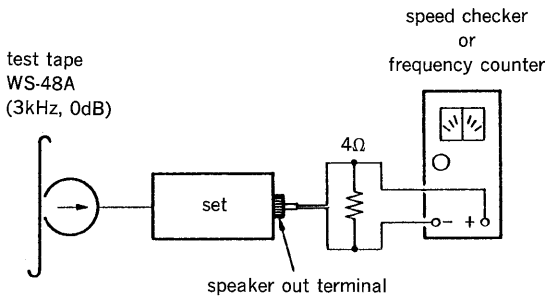
4. Repeat the above adjustment for the PB REV mode.

Adjustment Location:



Tape Speed Adjustment

Setting :



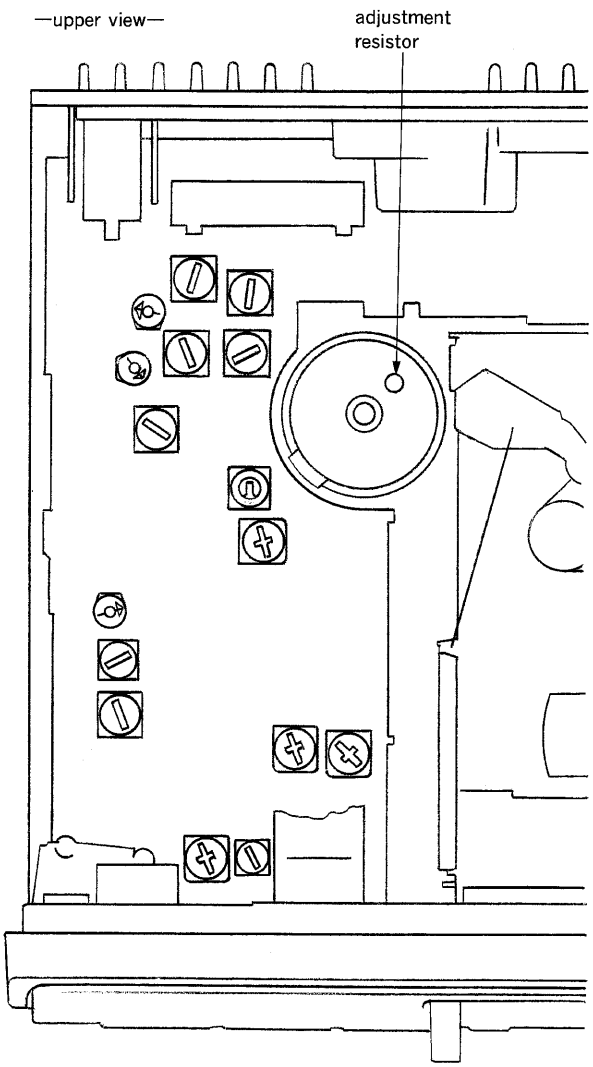
Procedure :

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification : Constant speed

Speed checker	Frequency counter
−2.0 to +3.0%	2,940 to 3,090Hz

Adjustment Location :



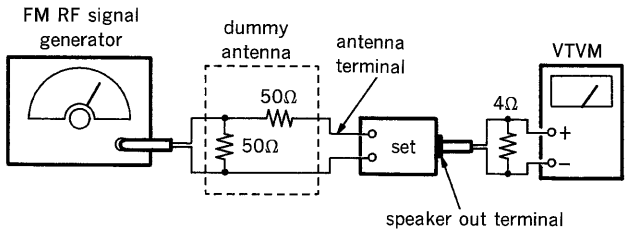
TUNER SECTION | 0dB=1μV

Cautions during repair
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

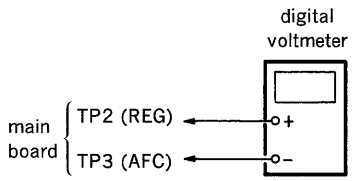
FM OV Adjustment

Setting :

TUNER button : FM
FM 50k/FM 200k switch : 50k (E model)



Carrier frequency : 97.9MHz (US, Canadian model)
98.0MHz (AEP, UK, E, German model)
Output level : 66dB (2mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation (100%)



Procedure :

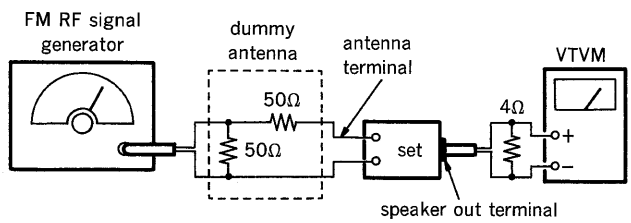
1. Tune the set to 97.9MHz (US, Canadian model) or 98.0MHz (AEP, UK, E, German model).
2. Adjust T255 so that the reading on the digital voltmeter becomes 0±0.05V.

Adjustment Location : See page 7.

FM High Cut Control Adjustment

Setting :

TUNER button : FM
FM 50k/FM 200k switch : 50k (E model)



Carrier frequency : 97.9MHz (US, Canadian model)
98.0MHz (AEP, UK, E, German model)
Output level : 26dB (20.0μV)
Mode : mono
Modulation : 10kHz, 75kHz deviation (100%)

Procedure :

1. Tune the set to 97.9MHz (US, Canadian model) or 98.0MHz (AEP, UK, E, German model).
2. The then output level is supposing that (A) dB.
3. Adjust RV253 so that the output level is (A)−5±1dB then signal generator input set to 20dB.

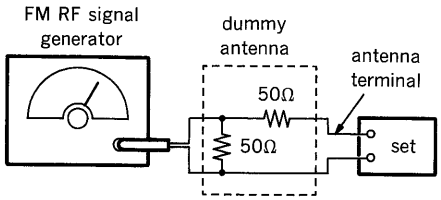
Adjustment Location : See page 7.

FM SEEK Stop Adjustment

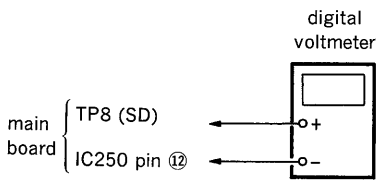
Note : Be sure to perform this adjustment before "AM (MW) SEEK Stop Adjustment".

Setting :

TUNER button : FM
FM 50k/FM 200k switch : 50k (E model)



Carrier frequency : 97.9MHz (US, Canadian model)
98.0MHz (AEP, UK, E, German model)
Output level : 22dB (12.6μV)
Mode : mono
Modulation : no modulation



Procedure :

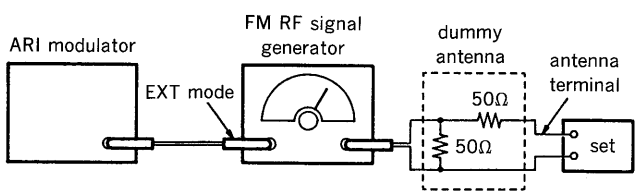
1. Short the TP9 and GND. (See page 8.)
2. Adjust RV251 so that the reading on the digital voltmeter becomes 3Vdc.
3. After adjustment is completed remove the short wire.

Adjustment Location : See page 7.

SDK Adjustment (XR-3502 only)

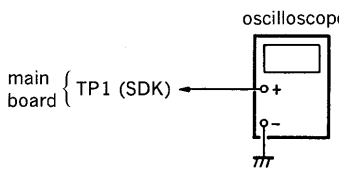
Setting :

SDK button : ON



ARI modulation
SK : 1.3%
DK : 30%
BK : 60%

Carrier frequency : 97.9MHz (US, Canadian model)
98.0MHz (AEP, UK, E, German model)
Output level : 66dB (2mV)
Mode : stereo
Modulation : 1kHz, 7.5kHz deviation



Procedure :

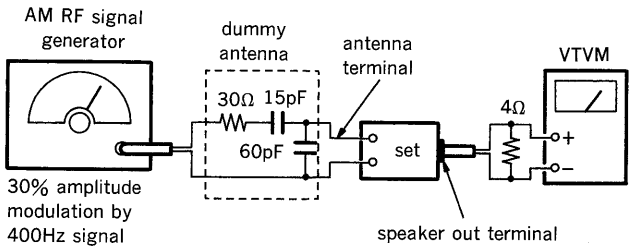
1. Adjust L700 and RV700 so that the output of 125Hz waveform becomes the maximum.

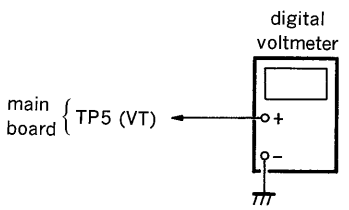
Adjustment Location : See page 7.

AM (MW) VT Adjustment

Setting :

TUNER button : AM (XR-3500/3502) or MW (XR-3501)
AM 9k/AM 10k switch : 9k (E model)





Procedure :

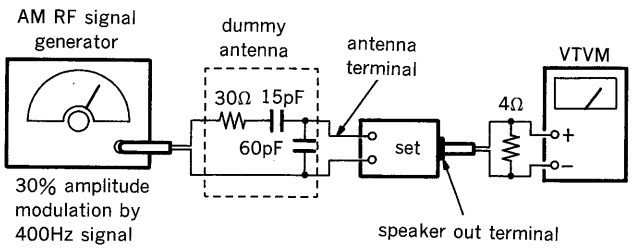
1. Tune the set to 530kHz (US, Canadian model) or 531kHz (AEP, UK, E, German model).
2. Adjust L252 so that the reading on the digital voltmeter becomes 1.5±0.05V.
3. Tune the set to 1,710kHz (US, Canadian model) or 1,602kHz (AEP, UK, E, German model).
4. Adjust CT252 so that the reading on the digital voltmeter becomes 7.8±0.1V (US, Canadian model) or 7.4±0.1V (AEP, UK, E, German model).

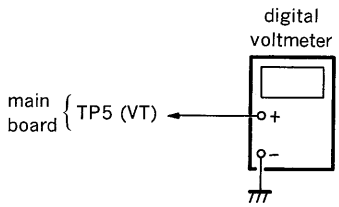
Adjustment Location : See page 7.

LW VT Adjustment (XR-3501 only)

Setting :

TUNER button : LW





Procedure :

1. Tune the set to 153kHz.
2. Adjust L251 so that the reading on the digital voltmeter becomes 3.0±0.1V.
3. Tune the set to 279kHz.
4. Confirm that the reading on the digital voltmeter becomes 7.0±0.3V.

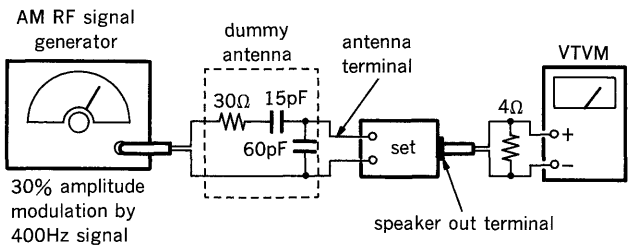
Adjustment Location : See page 7.

AM (MW) IF Adjustment

Setting :

TUNER button : AM (XR-3500/3502) or MW (XR-3501)

AM 9k/AM 10k switch : 9k (E model)



Procedure :

1. Tune the set to 1,000kHz (US, Canadian model) or 999kHz (AEP, UK, E, German model).
2. Adjust T254 so that the reading on the VTVM becomes to maximum.

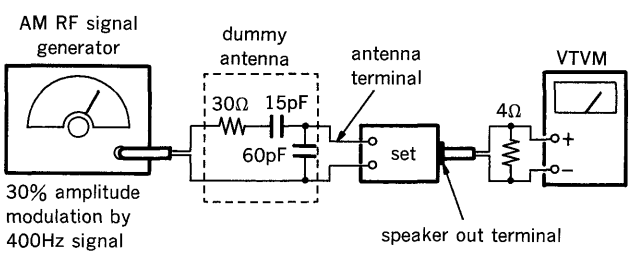
Adjustment Location : See page 7.

AM (MW) Tracking Adjustment

Setting :

TUNER button : AM (XR-3500/3502) or MW (XR-3501)

AM 9k/AM 10k switch : 9k (E model)



Procedure :

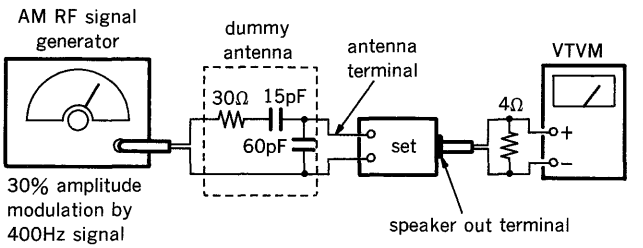
1. Tune the set to 600kHz (US, Canadian model) or 603kHz (AEP, UK, E, German model).
2. Adjust T250 and T252 so that the reading on the VTVM becomes to maximum.
3. Tune the set to 1,610kHz (US, Canadian model) or 1,404kHz (AEP, UK, E, German model).
4. Adjust CT250 and CT251 so that the reading on the VTVM becomes to maximum.

Adjustment Location : See page 7.

LW Tracking Adjustment (XR-3501 only)

Setting :

TUNER button : LW



Procedure :

1. Tune the set to 153kHz.
2. Adjust T251 and T253 so that the reading on the VTVM becomes to maximum.

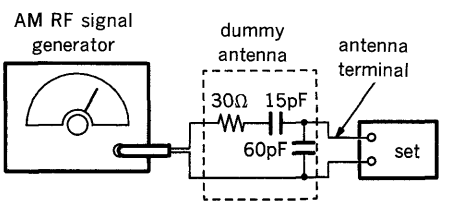
Adjustment Location : See page 7.

AM (MW) SEEK Stop Adjustment

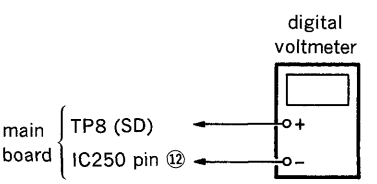
Setting :

TUNER button : AM (XR-3500/3502) or MW (XR-3501)

AM 9k/AM 10k switch : 9k (E model)



Carrier frequency : 1,000kHz (US, Canadian medel)
999kHz (AEP, UK, E, German model)
Output level : 33dB (44.7μV)
Modulation : no modulation

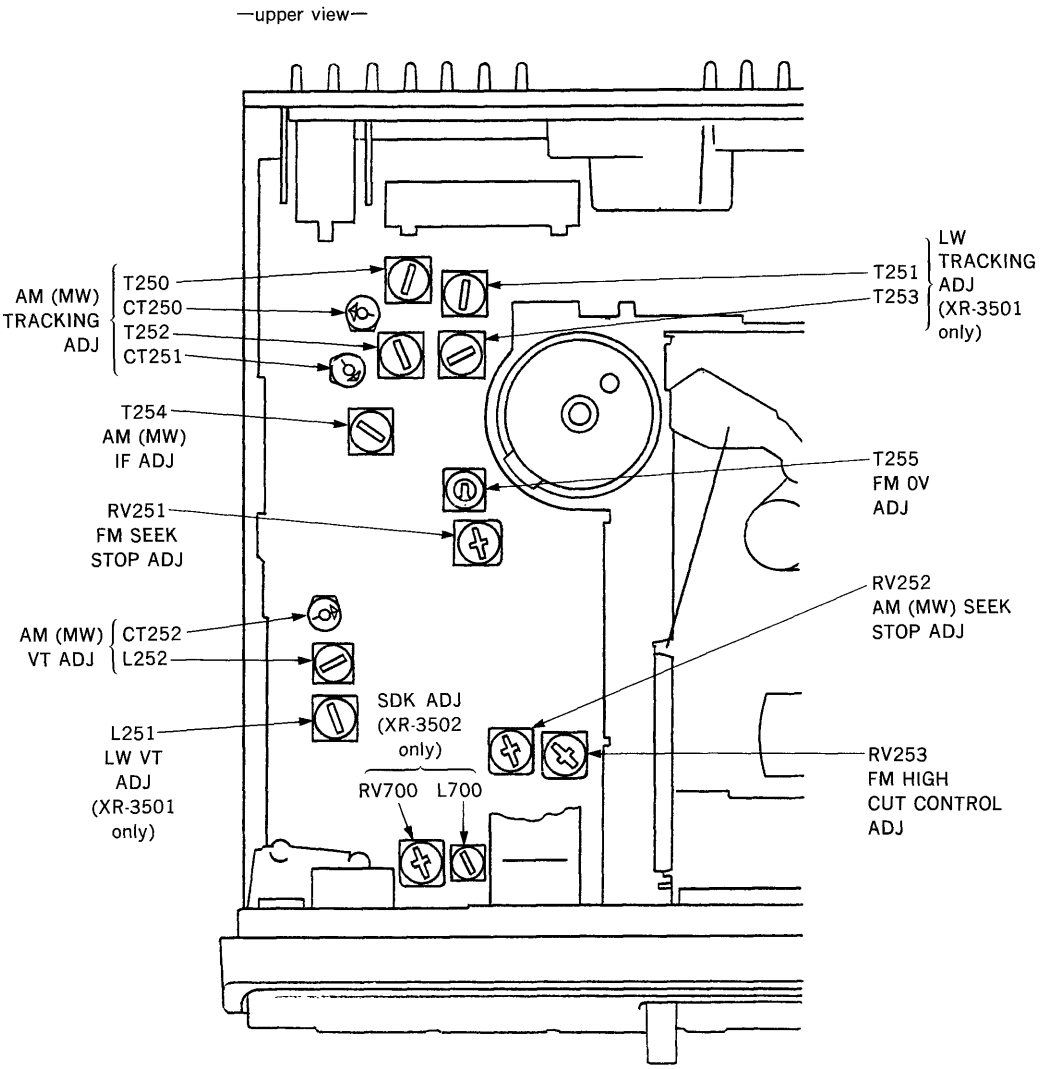


Procedure :

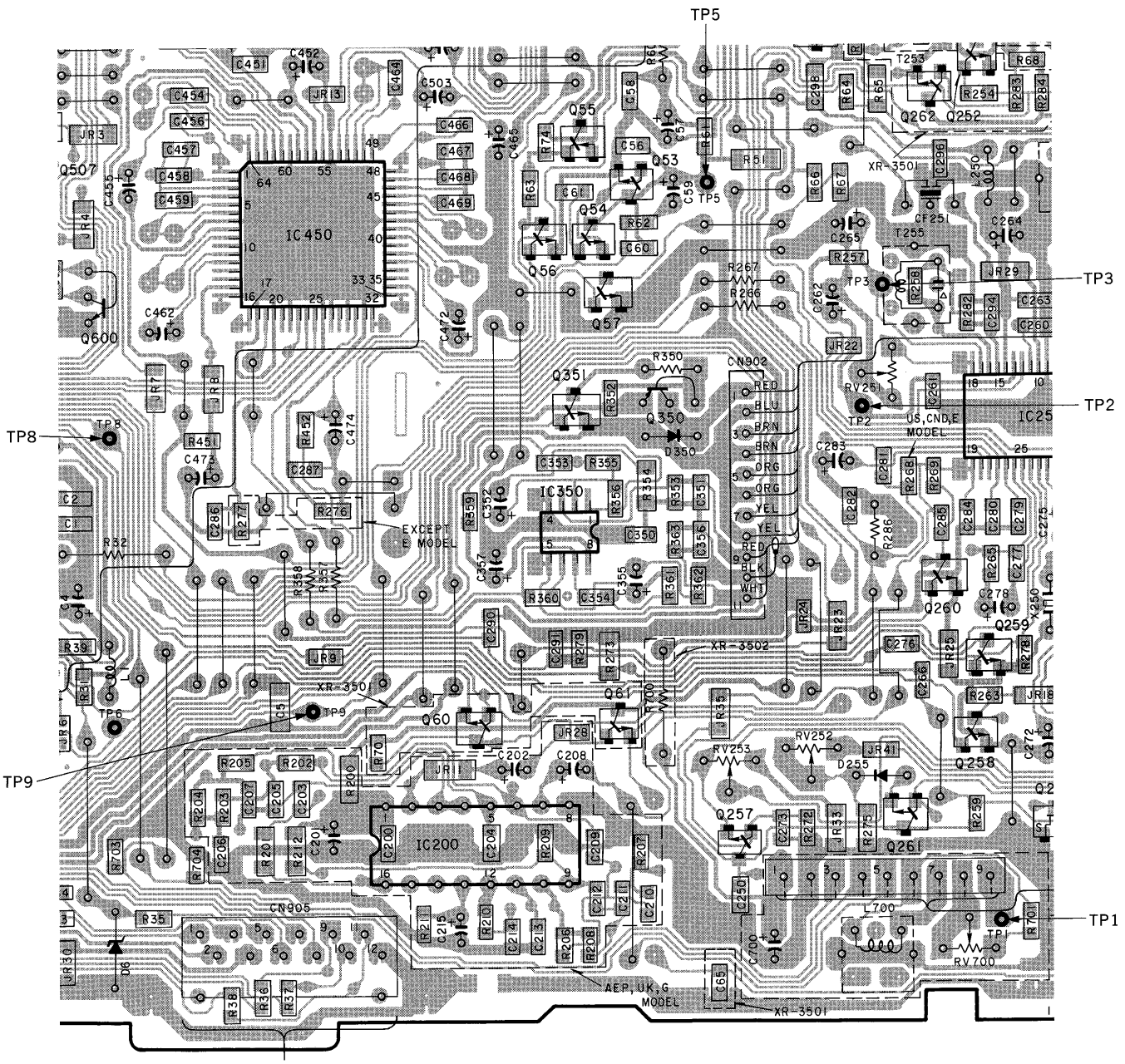
1. Short the TP9 and GND. (See page 8.)
2. Adjust RV252 so that the reading on the digital voltmeter becomes 3Vdc.
3. After adjustment is completed remove the short wire.

Adjustment Location : See page 7.

Adjustment Location : main board



—main board (conductor side)—



3. CHANGE THE PC BOARD

3-1. PRINTED WIRING BOARDS

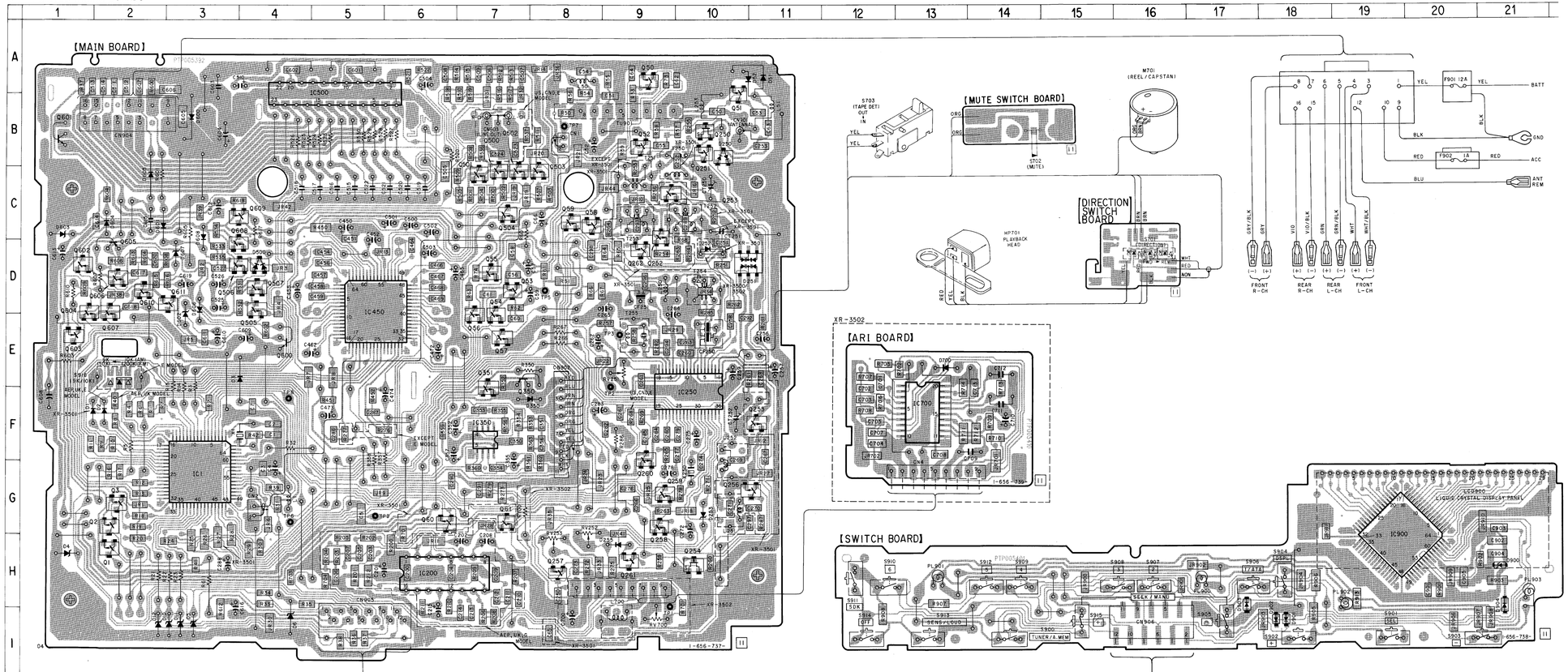
● **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
(D1)	F-1	Q51	B-10
⟨D2⟩	F-2	Q52	B-9
D3	E-3	Q53	D-7
D4	H-1	Q54	D-7
D5	I-3	Q55	D-7
D6	I-4	Q56	E-7
D10	I-2	Q57	E-7
D11	I-3	Q58	C-8
D12	I-2	Q59	C-8
D51	A-11	(Q60)	G-6
D52	A-11	(Q61)	G-7
D250	B-10	Q250	B-10
D251	D-10	Q251	B-10
(D252)	D-10	(Q252)	D-9
D253	G-10	(Q253)	C-10
D255	H-9	Q254	H-10
D350	F-7	(Q255)	F-11
D500	D-4	(Q256)	G-10
D600	B-3	Q257	H-8
D601	C-2	Q258	H-9
D602	E-3	Q259	G-9
D603	C-1	Q260	G-9
D604	C-2	Q261	H-9
D605	C-2	(Q262)	D-9
D606	D-3	Q350	F-7
D607	D-3	Q351	E-7
D608	C-3	Q500	B-7
(D700)	E-13	Q501	B-7
D900	H-21	Q502	B-7
D901	I-18	Q503	B-8
D902	I-18	Q504	C-7
D903	H-17	Q505	E-4
D904	H-21	Q506	D-3
		Q507	D-4
IC1	G-3	Q600	E-4
⟨⟨IC200⟩⟩	H-6	Q601	B-1
IC250	F-10	Q602	D-1
IC350	F-7	Q603	E-1
IC450	D-5	Q604	D-1
IC500	A-5	Q605	D-2
(IC700)	F-13	Q606	D-2
IC900	H-19	Q607	E-2
		Q608	C-3
Q1	H-2	Q609	C-4
Q2	G-2	Q610	D-2
Q3	G-2	Q611	D-3
Q50	A-9		

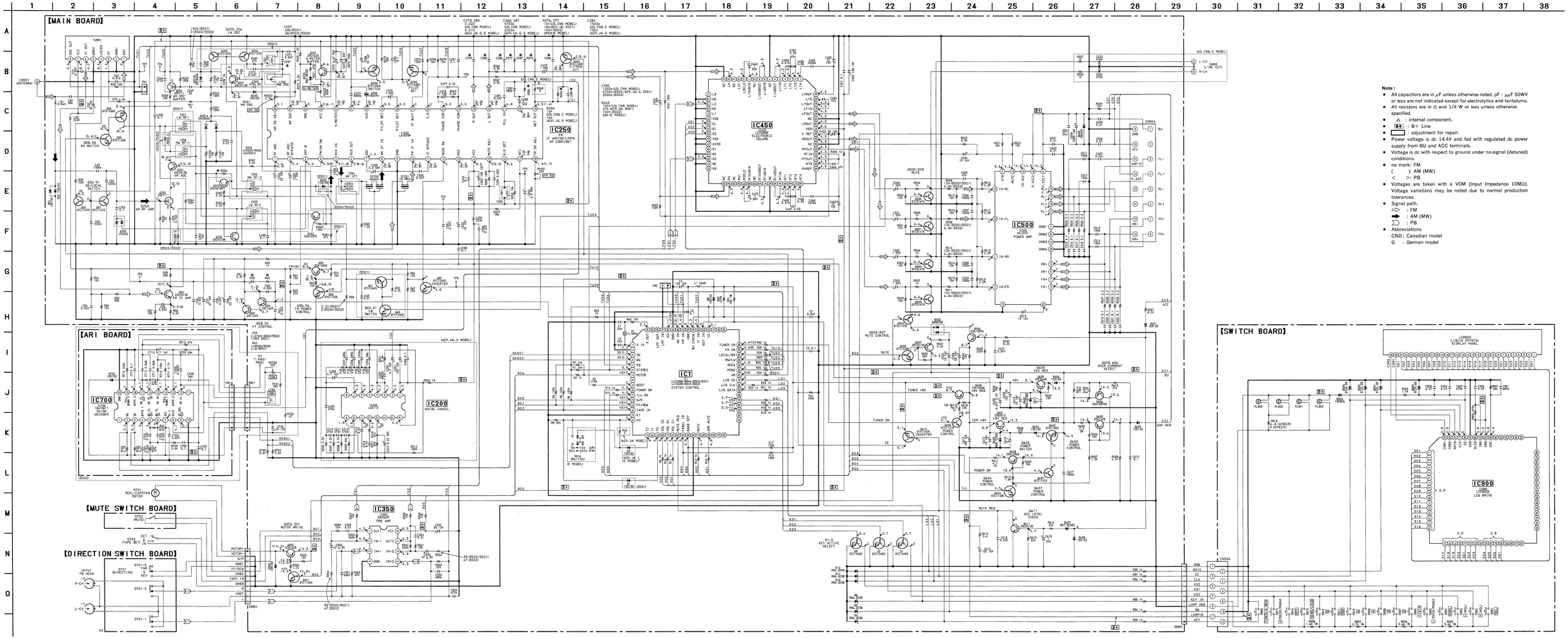
( ): XR-3501 only
⟨ ⟩: AEP, UK, E model only
[ ]: XR-3502 only
⟨⟨ ⟩⟩: AEP, UK, German model only

Note:

- ○— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▭ : Pattern on the side which is seen.
- Abbreviations
  CND: Canadian model
  G : German model



3-2. SCHEMATIC DIAGRAM


【MAIN BOARD】
【ARI BOARD】
【MUTE SWITCH BOARD】
【DIRECTION SWITCH BOARD】
【SWITCH BOARD】
IC1
IC200
IC250
IC350
IC450
IC500
IC700
IC900
Note :
• All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
• All resistors are in Ω and 1/4 W or less unless otherwise specified.
• △ : internal component.
• ▮▮ : B+ Line
• ▭ : adjustment for repair.
• Power voltage is dc 14.4V and fed with regulated dc power supply from BU and ACC terminals.
• Voltage is dc with respect to ground under no-signal (detuned) conditions.
• no mark: FM
( ): AM (MW)
< >: PB
• Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
• Signal path.
: FM
: AM (MW)
: PB
• Abbreviations
CND : Canadian model
G : German model

3-3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA . . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. . uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

- Abbreviation
  G : German model

Ref. No.	Part No.	Description			Remark
		ARI BOARD (INCLUDED IN MAIN BOARD, COMPLETE) (3502)			
		*********			
		< CAPACITOR >			
C700	1-128-054-11	ELECT	22uF	20%	10V (3502)
C701-703					
	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V (3502)
C704	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (3502)
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
C707	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
C708	1-163-245-11	CERAMIC CHIP	56PF	5%	50V (3502)
C709	1-130-477-00	MYLAR	0.0033uF	5%	50V (3502)
C710	1-126-288-11	ELECT	4.7uF	20%	16V (3502)
C711	1-136-163-00	FILM	0.068uF	5%	50V (3502)
C712	1-136-163-00	FILM	0.068uF	5%	50V (3502)
C713	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3502)
		< DIODE >			
D700	8-719-991-33	DIODE 1SS133T-77 (3502)			
		< IC >			
IC700	8-759-998-24	IC TDA1579T (3502)			
		< RESISTOR >			
R702	1-216-065-00	METAL CHIP	4.7K 5%		1/10W (3502)
R705	1-216-065-00	METAL CHIP	4.7K 5%		1/10W (3502)
R706	1-208-849-11	METAL GLAZE	620K 5%		1/10W (3502)
R707	1-216-089-00	METAL CHIP	47K 5%		1/10W (3502)
R708	1-216-067-00	METAL CHIP	5.6K 5%		1/10W (3502)
R709	1-216-093-11	METAL GLAZE	68K 5%		1/10W (3502)
R710	1-216-089-00	METAL CHIP	47K 5%		1/10W (3502)
R711	1-216-214-00	METAL GLAZE	4.7K 5%		1/8W (3502)
R712	1-216-246-00	METAL GLAZE	100K 5%		1/8W (3502)
R713	1-216-117-00	METAL CHIP	680K 5%		1/10W (3502)
R714	1-216-105-00	METAL CHIP	220K 5%		1/10W (3502)
**********					
*	A-3222-910-A	MAIN BOARD, COMPLETE (US, Canadian)			
*	A-3222-911-A	MAIN BOARD, COMPLETE (AEP, UK)			
*	A-3222-912-A	MAIN BOARD, COMPLETE (3501)			
*	A-3222-913-A	MAIN BOARD, COMPLETE (INCLUDING ARI BOARD) (3502)			
*	A-3222-923-A	MAIN BOARD, COMPLETE (E)			
		**********			
		< CAPACITOR >			
C1	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C2	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C3	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C4	1-124-584-00	ELECT	100uF	20%	10V
C5	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C7	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C50	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C51	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C52	1-126-967-11	ELECT	47uF	20%	10V
C53	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C54-56					
	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C57	1-124-589-11	ELECT	47uF	20%	16V
C58	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C59	1-124-257-00	ELECT	2.2uF	20%	50V (3500/3502)
C59	1-126-301-11	ELECT	1uF	20%	50V (3501)
C60	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C61	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C62	1-136-829-11	FILM	0.012uF	5%	50V
C63	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C64	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C65	1-164-232-11	CERAMIC CHIP	0.01uF		50V (3501)
C66	1-128-054-11	ELECT	22uF	20%	10V
C200	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (AEP, UK, G)
C201	1-124-584-00	ELECT	100uF	20%	10V (AEP, UK, G)
C202	1-126-288-11	ELECT	4.7uF	20%	16V (AEP, UK, G)
C203	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V (AEP, UK, G)
C204	1-163-113-00	CERAMIC CHIP	68PF	5%	50V (AEP, UK, G)
C205	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V (AEP, UK, G)
C206	1-163-007-11	CERAMIC CHIP	680PF	10%	50V (AEP, UK, G)
C207	1-163-007-11	CERAMIC CHIP	680PF	10%	50V (AEP, UK, G)
C208	1-126-288-11	ELECT	4.7uF	20%	16V (AEP, UK, G)
C209-212	1-163-002-11	CERAMIC CHIP	270PF	10%	50V (AEP, UK, G)
C213	1-164-232-11	CERAMIC CHIP	0.01uF		50V (AEP, UK, G)
C214	1-164-232-11	CERAMIC CHIP	0.01uF		50V (AEP, UK, G)
C215	1-124-464-11	ELECT	0.22uF	20%	50V (AEP, UK, G)
C250	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C251	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C252	1-163-097-00	CERAMIC CHIP	15PF	5%	50V (3501)
C253	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C256	1-128-054-11	ELECT	22uF	20%	10V
C257	1-126-301-11	ELECT	1uF	20%	50V
C258	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C259	1-126-162-11	ELECT	3.3uF	20%	50V
C260	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C261	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C262	1-126-157-11	ELECT	10uF	20%	16V
C263	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C264	1-124-584-00	ELECT	100uF	20%	10V
C265	1-126-162-11	ELECT	3.3uF	20%	50V
C266	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C267	1-163-222-11	CERAMIC CHIP	5PF	0.5PF	50V
C268	1-163-123-00	CERAMIC CHIP	180PF	5%	50V (3501)
C269	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C270	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V (3501)
C271	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C272	1-126-159-11	ELECT	0.47uF	20%	50V
C273	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C274	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C275	1-126-301-11	ELECT	1uF	20%	50V
C276	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C277	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C278	1-126-301-11	ELECT	1uF	20%	50V
C279	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V (AEP, UK, E, G)
C279	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (US, Canadian)
C280	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V (AEP, UK, E, G)
C280	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (US, Canadian)
C281	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C282	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C283	1-124-463-00	ELECT	0.1uF	20%	50V
C284	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V (US, Canadian, E)
C284	1-163-121-00	CERAMIC CHIP	150PF	5%	50V (AEP, UK, G)
C285	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (US, Canadian)
C285	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (3500:AEP, UK, E, 3501)
C285	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V (3502)
C286	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (US, Canadian)
C286	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V (AEP, UK, E, G)
C287	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V (US, Canadian)
C287	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V (AEP, UK, E, G)
C288	1-126-157-11	ELECT	10uF	20%	16V
C289	1-216-295-00	CONDUCTOR, CHIP	(2012)		(3500/3502)
C290	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C291	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C292	1-163-222-11	CERAMIC CHIP	5PF	0.5PF	50V
C293	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (3501)
C294	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C296	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C297	1-163-113-00	CERAMIC CHIP	68PF	5%	50V (3501)
C297	1-216-295-00	CONDUCTOR, CHIP	(2012)		(3500/3502)
C298	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C350	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C351	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C352	1-126-154-11	ELECT	47uF	20%	6.3V
C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C354	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C355	1-126-154-11	ELECT	47uF	20%	6.3V
C356	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C357	1-124-229-00	ELECT	33uF	20%	10V
C450	1-124-584-00	ELECT	100uF	20%	10V
C451	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C452	1-124-229-00	ELECT	33uF	20%	10V
C454	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C455	1-128-054-11	ELECT	22uF	20%	10V
C456	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C457	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C458	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C459	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C462	1-126-301-11	ELECT	1uF	20%	50V
C464	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C465	1-128-054-11	ELECT	22uF	20%	10V
C466	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C467	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C468	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C469	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C472-474					
	1-126-301-11	ELECT	1uF	20%	50V
C500-503					
	1-126-301-11	ELECT	1uF	20%	50V
C504	1-126-157-11	ELECT	10uF	20%	16V
C505	1-163-173-00	CERAMIC CHIP	47PF	5%	50V
C506-509					
	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C510	1-126-157-11	ELECT	10uF	20%	16V
C511-514					
	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C515-522					
	1-136-165-00	FILM	0.1uF	5%	50V
C523	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
					(US, Canadian, E)
C524	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
					(US, Canadian, E)
C525	1-126-157-11	ELECT	10uF	20%	16V
C526	1-124-229-00	ELECT	33uF	20%	10V
C527	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C601	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C602	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C603	1-136-169-00	FILM	0.22uF	5%	50V
C604	1-126-936-11	ELECT	3300uF	20%	16V
C605	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C606	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description			Remark
C607	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C608	1-125-701-11	DOUBLE LAYERS	0.047F		5.5V
C609	1-124-584-00	ELECT	100uF	20%	10V
C610	1-126-157-11	ELECT	10uF	20%	16V
C611	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C612	1-124-584-00	ELECT	100uF	20%	10V
C613	1-126-157-11	ELECT	10uF	20%	16V
C614	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C615	1-136-165-00	FILM	0.1uF	5%	50V
C616	1-128-134-11	ELECT	100uF	20%	16V
C617	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C618	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C619	1-126-301-11	ELECT	1uF	20%	50V
C620	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
		< FILTER >			
CF250	1-579-890-11	FILTER, CERAMIC			
CF251	1-760-553-11	FILTER, CERAMIC			
		< JACK >			
CN901	1-764-425-11	JACK (ANTENNA)			
CN903	1-764-424-41	JACK, PIN 2P (LINE OUT) (US, Canadian, E)			
		< CONNECTOR >			
* CN902	1-506-993-11	PIN, CONNECTOR (PC BOARD) 11P			
CN904	1-770-486-11	CONNECTOR (POWER) 16P			
CN905	1-770-445-11	SOCKET, CONNECTOR 12P			
		< TRIMMER >			
CT250-252					
	1-141-245-00	CAP, TRIMMER	30PF		
		< DIODE >			
D1	8-719-991-33	DIODE	1SS133T-77 (3501)		
D2	8-719-991-33	DIODE	1SS133T-77 (AEP, UK, E)		
D3	8-719-991-33	DIODE	1SS133T-77		
D4	8-719-109-93	DIODE	RD6.2ESB2		
D5	8-719-109-93	DIODE	RD6.2ESB2		
D6	8-719-109-93	DIODE	RD6.2ESB2		
D10	8-719-109-93	DIODE	RD6.2ESB2		
D11	8-719-109-93	DIODE	RD6.2ESB2		
D12	8-719-109-93	DIODE	RD6.2ESB2		
D51	8-719-991-33	DIODE	1SS133T-77		
D52	8-719-991-33	DIODE	1SS133T-77		
D250	8-719-049-16	DIODE	1SV234		
D251	8-719-053-81	DIODE	SVC354S		
D252	8-719-991-33	DIODE	1SS133T-77 (3501)		
D253	8-719-109-62	DIODE	RD3.0ES-B1		

MAIN

Ref. No.	Part No.	Description	Remark
D255	8-719-991-33	DIODE 1SS133T-77	
D350	8-719-984-80	DIODE 1SR139-200	
D500	8-719-914-43	DIODE DAN202K	
D600	8-719-049-38	DIODE 1N5404TU	
D601	8-719-991-33	DIODE 1SS133T-77	
D602	8-719-109-90	DIODE RD5.6ESB3	
D603	8-719-110-14	DIODE RD9.1ES-B3	
D604	8-719-991-33	DIODE 1SS133T-77	
D605	8-719-984-80	DIODE 1SR139-200	
D606	8-719-991-33	DIODE 1SS133T-77	
D607	8-719-921-63	DIODE MTZJ-7.5B	
D608	8-719-991-33	DIODE 1SS133T-77	
		< IC >	
IC1	8-759-346-11	IC LC7233N-8946 (3500/3501)	
IC1	8-759-346-12	IC LC7233N-8942 (3502)	
IC200	8-759-801-94	IC LA2113 (AEP, UK, G)	
IC250	8-759-261-38	IC LA1875M-TP-T1	
IC350	8-759-924-46	IC BA4560F	
IC450	8-759-330-62	IC LC75383ED	
IC500	8-759-279-87	IC HA13151A	
		< JUMPER RESISTOR >	
JR1	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR2	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR3	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR4	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR5	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR6	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR7	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR8	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR9	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR10	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR11	1-216-296-00	CONDUCTOR, CHIP (3216)	(AEP, UK, G)
JR12	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR13	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR14	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR16	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR18-21	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR22	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR23	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR24	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR25	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR27	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR29-31	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR32	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR33	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR34	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR35	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR36-39	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR41	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR42	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR44	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-410-513-11	INDUCTOR 22uH	
L50	1-410-513-11	INDUCTOR 22uH	
L51	1-410-503-11	INDUCTOR 3.3uH	
L250	1-410-513-11	INDUCTOR 22uH	
L251	1-411-244-11	COIL (LW OSC) (3501)	
L252	1-411-243-11	COIL (AM OSC)	
L253	1-408-405-00	INDUCTOR 4.7uH	
L700	1-424-036-11	COIL (FILTER) (3502)	
		< TRANSISTOR >	
Q1	8-729-901-01	TRANSISTOR DTC144EK	
Q2	8-729-901-01	TRANSISTOR DTC144EK	
Q3	8-729-901-01	TRANSISTOR DTC144EK	
Q50	8-729-902-99	TRANSISTOR DTC114TK	
Q51	8-729-902-99	TRANSISTOR DTC114TK	
Q52	8-729-931-02	TRANSISTOR 2SC2413KQ	
Q53	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q54	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q55	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q56	8-729-900-53	TRANSISTOR DTC114EK	
Q57	8-729-901-00	TRANSISTOR DTC124EK	
Q58	8-729-901-05	TRANSISTOR DTA124EK	
Q59	8-729-900-53	TRANSISTOR DTC114EK	
Q60	8-729-901-01	TRANSISTOR DTC144EK (3501)	
Q61	8-729-901-00	TRANSISTOR DTC124EK (3501)	
Q250	8-729-012-35	TRANSISTOR 2SK711-BL	
Q251	8-729-931-02	TRANSISTOR 2SC2413KQ	
Q252	8-729-032-50	TRANSISTOR 2SC4018K-N (3501)	
Q253	8-729-032-50	TRANSISTOR 2SC4018K-N (3501)	
Q254	8-729-012-35	TRANSISTOR 2SK711-BL	
Q255	8-729-902-99	TRANSISTOR DTC114TK (3501)	
Q256	8-729-902-99	TRANSISTOR DTC114TK (3501)	
Q257	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q258	8-729-901-01	TRANSISTOR DTC144EK	
Q259	8-729-901-01	TRANSISTOR DTC144EK	
Q260	8-729-900-53	TRANSISTOR DTC114EK	
Q261	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q262	8-729-216-22	TRANSISTOR 2SA1162-G (3501)	
Q350	8-729-205-94	TRANSISTOR 2SA1428-O	
Q351	8-729-900-53	TRANSISTOR DTC114EK	

Ref. No.	Part No.	Description				Remark
Q500	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q501	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q502	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q503	8-729-920-21	TRANSISTOR	DTC314TKH04			
Q504	8-729-900-51	TRANSISTOR	DTA114TK			
Q505	8-729-901-00	TRANSISTOR	DTC124EK			
Q506	8-729-216-22	TRANSISTOR	2SA1162-G			
Q507	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q600	8-729-205-97	TRANSISTOR	2SC3668-Y			
Q601	8-729-209-15	TRANSISTOR	2SD2012			
Q602	8-729-901-04	TRANSISTOR	DTA114EK			
Q603	8-729-901-97	TRANSISTOR	2SA1036K-Q			
Q604	8-729-900-53	TRANSISTOR	DTC114EK			
Q605	8-729-205-94	TRANSISTOR	2SA1428-O			
Q606	8-729-216-22	TRANSISTOR	2SA1162-G			
Q607	8-729-902-99	TRANSISTOR	DTC114TK			
Q608	8-729-902-99	TRANSISTOR	DTC114TK			
Q609	8-729-901-97	TRANSISTOR	2SA1036K-Q			
Q610	8-729-901-04	TRANSISTOR	DTA114EK			
Q611	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
		< RESISTOR >				
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R2	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R3	1-247-895-00	CARBON	470K	5%	1/4W	
R4	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R5	1-247-879-11	CARBON	100K	5%	1/4W	
R6	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R7	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R8	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R9-13						
	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R14	1-249-417-11	CARBON	1K	5%	1/4W	
R15	1-249-417-11	CARBON	1K	5%	1/4W	
R16	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R17	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R18-20						
	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R21-23						
	1-249-417-11	CARBON	1K	5%	1/4W	
R24	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R25	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R26	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R27	1-216-198-00	METAL CHIP	1K	5%	1/8W	(3501)
R28	1-216-198-00	METAL CHIP	1K	5%	1/8W	
R29	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R30	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R31	1-208-806-11	METAL GLAZE	10K	1%	1/10W	
R32	1-249-417-11	CARBON	1K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R33-38						
	1-216-049-11	METAL GLAZE	1K	5%	1/10W	
R39	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R40	1-216-295-00	CONDUCTOR, CHIP				(2012) (AEP, UK)
R41	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R42	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R50	1-216-025-00	METAL CHIP	100	5%	1/10W	
R51	1-216-198-00	METAL CHIP	1K	5%	1/8W	
R53	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R55	1-216-039-00	METAL CHIP	390	5%	1/10W	
R56	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R57	1-216-029-00	METAL CHIP	150	5%	1/10W	
R58	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R59	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R60	1-249-417-11	CARBON	1K	5%	1/4W	
R61	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R62	1-216-049-11	METAL GLAZE	1K	5%	1/10W	(3500/3502)
R62	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(3501)
R63	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R64	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R65	1-216-230-00	METAL GLAZE	22K	5%	1/8W	
R66	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R67	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R68	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(3501)
R68	1-216-296-00	CONDUCTOR, CHIP				(3216) (3500/3502)
R70	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	(3501)
R73	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W	
R74	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R200	1-216-150-00	METAL GLAZE	10	5%	1/8W	(AEP, UK, G)
R201	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W	(AEP, UK, G)
R202-205						
	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	(AEP, UK, G)
R206	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(AEP, UK, G)
R207	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	(AEP, UK, G)
R208	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	(AEP, UK, G)
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W	(AEP, UK, G)
R210	1-216-089-00	METAL CHIP	47K	5%	1/10W	(AEP, UK, G)
R211	1-216-089-00	METAL CHIP	47K	5%	1/10W	(AEP, UK, G)

MAIN

Ref. No.	Part No.	Description			Remark
R212	1-216-246-00	METAL GLAZE	100K	5%	1/8W (AEP, UK, G)
R251	1-216-097-00	METAL CHIP	100K	5%	1/10W
R252	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (3501)
R253	1-216-295-00	CONDUCTOR, CHIP			(2012) (3500/3502)
R254	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (3501)
R255	1-216-121-00	METAL CHIP	1M	5%	1/10W
R256	1-216-081-00	METAL CHIP	22K	5%	1/10W (3501)
R256	1-216-295-00	CONDUCTOR, CHIP			(2012) (3500/3502)
R257	1-216-079-00	METAL CHIP	18K	5%	1/10W
R258	1-216-073-00	METAL CHIP	10K	5%	1/10W
R259	1-216-025-00	METAL CHIP	100	5%	1/10W
R260	1-216-097-00	METAL CHIP	100K	5%	1/10W
R261	1-216-097-00	METAL CHIP	100K	5%	1/10W (3501)
R261	1-216-295-00	CONDUCTOR, CHIP			(2012) (3500/3502)
R262	1-216-097-00	METAL CHIP	100K	5%	1/10W
R263	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R264	1-216-101-00	METAL CHIP	150K	5%	1/10W (3501)
R265	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R266	1-249-423-11	CARBON	3.3K	5%	1/4W
R267	1-249-423-11	CARBON	3.3K	5%	1/4W
R268	1-216-295-00	CONDUCTOR, CHIP			(2012) (US, Canadian, E)
R269	1-216-089-00	METAL CHIP	47K	5%	1/10W (AEP, UK, 3501)
R269	1-216-093-11	METAL GLAZE	68K	5%	1/10W (E)
R269	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R269	1-216-101-00	METAL CHIP	150K	5%	1/10W (US, Canadian)
R271	1-216-041-11	METAL GLAZE	470	5%	1/10W
R272	1-216-097-00	METAL CHIP	100K	5%	1/10W
R273	1-216-234-00	METAL GLAZE	33K	5%	1/8W
R275	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R276	1-216-073-00	METAL CHIP	10K	5%	1/10W (US, Canadian)
R276	1-216-079-00	METAL CHIP	18K	5%	1/10W (AEP, UK, 3501)
R276	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W (US, Canadian)
R277	1-216-079-00	METAL CHIP	18K	5%	1/10W (AEP, UK, 3501)
R277	1-216-097-00	METAL CHIP	100K	5%	1/10W (3502)
R278	1-216-073-00	METAL CHIP	10K	5%	1/10W
R279	1-216-073-00	METAL CHIP	10K	5%	1/10W
R281	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R282	1-216-103-00	METAL CHIP	180K	5%	1/10W
R283	1-216-097-00	METAL CHIP	100K	5%	1/10W (3501)
R284	1-216-089-00	METAL CHIP	47K	5%	1/10W (3501)
R285	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R286	1-247-860-11	CARBON	16K	5%	1/4W (AEP, UK, G)
R286	1-249-430-11	CARBON	12K	5%	1/4W (US, Canadian, E)
R287	1-216-089-00	METAL CHIP	47K	5%	1/10W (3501)
R350	1-249-418-11	CARBON	1.2K	5%	1/4W
R352	1-216-073-00	METAL CHIP	10K	5%	1/10W
R353	1-216-089-00	METAL CHIP	47K	5%	1/10W
R354	1-216-164-00	METAL GLAZE	39	5%	1/8W (3500/3501)
R354	1-216-166-00	METAL GLAZE	47	5%	1/8W (3502)
R355	1-216-077-00	METAL CHIP	15K	5%	1/10W
R356	1-216-115-00	METAL CHIP	560K	5%	1/10W
R357	1-247-855-11	CARBON	10K	5%	1/4W
R358	1-247-855-11	CARBON	10K	5%	1/4W
R359	1-216-025-00	METAL CHIP	100	5%	1/10W
R360	1-216-115-00	METAL CHIP	560K	5%	1/10W
R361	1-216-077-00	METAL CHIP	15K	5%	1/10W
R362	1-216-015-00	METAL CHIP	39	5%	1/10W (3500/3501)
R362	1-216-017-00	METAL CHIP	47	5%	1/10W (3502)
R363	1-216-089-00	METAL CHIP	47K	5%	1/10W
R450	1-216-150-00	METAL GLAZE	10	5%	1/8W
R451	1-216-097-00	METAL CHIP	100K	5%	1/10W
R452	1-216-097-00	METAL CHIP	100K	5%	1/10W
R500-503	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504-507	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R508	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R508	1-216-075-00	METAL CHIP	12K	5%	1/10W (3500/3501)
R509	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R509	1-216-075-00	METAL CHIP	12K	5%	1/10W (3500/3501)
R510	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R510	1-216-075-00	METAL CHIP	12K	5%	1/10W (3500/3501)
R511	1-216-069-11	METAL GLAZE	6.8K	5%	1/10W (3502)
R511	1-216-075-00	METAL CHIP	12K	5%	1/10W (3500/3501)
R512-515	1-216-077-00	METAL CHIP	15K	5%	1/10W
R516-519	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R520	1-249-423-11	CARBON	3.3K	5%	1/4W
R521	1-216-073-00	METAL CHIP	10K	5%	1/10W
R522	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R523-530					
	1-249-385-11	CARBON	2.2	5%	1/6W
R531	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R532	1-216-091-00	METAL CHIP	56K	5%	1/10W
R533	1-216-105-00	METAL CHIP	220K	5%	1/10W
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W
R535	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R536	1-216-295-00	CONDUCTOR, CHIP			(2012) (US, Canadian, E)
R537	1-216-295-00	CONDUCTOR, CHIP			(2012) (US, Canadian, E)
R600	1-216-073-00	METAL CHIP	10K	5%	1/10W
R601	1-249-428-11	CARBON	8.2K	5%	1/4W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-247-807-11	CARBON	100	5%	1/4W
R604	1-216-041-11	METAL GLAZE	470	5%	1/10W
R605	1-216-373-11	METAL GLAZE	2.2	5%	2W
R606	1-216-081-00	METAL CHIP	22K	5%	1/10W
R607	1-247-835-11	CARBON	1.5K	5%	1/4W
R608	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R609	1-216-073-00	METAL CHIP	10K	5%	1/10W
R610	1-247-835-11	CARBON	1.5K	5%	1/4W
R611	1-216-357-00	METAL GLAZE	4.7	5%	1W
R612	1-216-144-11	METAL GLAZE	5.6	5%	1/8W
R613	1-216-089-00	METAL CHIP	47K	5%	1/10W
R614	1-216-097-00	METAL CHIP	100K	5%	1/10W
R615	1-216-081-00	METAL CHIP	22K	5%	1/10W
R616	1-216-081-00	METAL CHIP	22K	5%	1/10W
R617	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-216-073-00	METAL CHIP	10K	5%	1/10W
R700	1-249-401-11	CARBON	47	5%	1/4W (3502)
R701	1-216-039-00	METAL CHIP	390	5%	1/10W (3502)
R703	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R704	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
		< VARIABLE RESISTOR >			
RV251	1-241-689-11	RES, ADJ, CARBON 22K			
RV252	1-241-686-11	RES, ADJ, CARBON 2.2K			
RV253	1-223-927-11	RES, ADJ, CARBON 330K			
RV700	1-241-759-21	RES, ADJ, CARBON 220 (3502)			
		< SWITCH >			
S916	1-554-222-00	SWITCH, SLIDE (9K/10K) (E)			
		< COIL >			
T250	1-411-239-11	COIL (AM ANT) (3500/3502)			
T250	1-411-240-11	COIL (LW ANT) (3501)			
T251	1-411-240-11	COIL (LW ANT) (3501)			
T252	1-411-239-11	COIL (AM ANT)			
T253	1-411-240-11	COIL (LW ANT) (3501)			
T254	1-411-246-11	COIL (AM IFT)			
T255	1-411-245-11	COIL (FM IFT)			
		< TUNER >			
TU901	1-693-285-11	TUNER, FM			
		< VIBRATOR >			
X1	1-567-713-11	VIBRATOR, CRYSTAL (4.5MHz)			
X250	1-760-250-11	OSCILLATOR, CERAMIC (456kHz)			
**********					
		SWITCH BOARD			
		**********			
*	3-922-509-01	PLATE (LCD), LIGHT GUIDE			
*	3-922-511-01	REFLECTOR			
*	3-922-522-01	PLATE (LCD), GROUND			
*	3-928-412-01	INSULATOR (FP CONNECTOR)			
		< CAPACITOR >			
C901	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C902	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C903	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C904	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C905	1-162-637-11	CERAMIC CHIP	0.47uF		16V
		< CONNECTOR >			
CN906	1-770-444-11	PIN, CONNECTOR 12P			
		< DIODE >			
D900	8-719-977-03	DIODE DTZ5.6B			
D901	8-719-105-99	DIODE RD6.2M-B1			
D902	8-719-105-99	DIODE RD6.2M-B1			
D903	8-719-105-99	DIODE RD6.2M-B1			
D904	8-719-988-62	DIODE 1SS355			
		< IC >			
IC900	8-759-341-77	IC LC75822E			
		< JUMPER RESISTOR >			
JR906-910					
	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR911	1-216-295-00	CONDUCTOR, CHIP			(2012)
		< LIQUID CRYSTAL DISPLAY >			
LCD900	1-810-848-11	DISPLAY PANEL, LIQUID CRYSTAL			

SWITCH

Ref. No.	Part No.	Description			Remark
		< PILOT LAMP >			
PL900	1-517-156-11	LAMP, PILOT (AMBER)			
PL900	1-517-156-51	LAMP, PILOT (GREEN)			
PL901	1-517-156-11	LAMP, PILOT (AMBER)			
PL901	1-517-156-51	LAMP, PILOT (GREEN)			
PL902	1-517-156-11	LAMP, PILOT (AMBER)			
PL902	1-517-465-11	LAMP, PILOT (GREEN)			
PL903	1-517-156-11	LAMP, PILOT (AMBER)			
PL903	1-517-465-11	LAMP, PILOT (GREEN)			
		< RESISTOR >			
R901	1-216-091-00	METAL CHIP	56K	5%	1/10W
R902	1-216-113-00	METAL CHIP	470K	5%	1/10W
R903	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R905	1-216-664-11	METAL CHIP	3.6K	0.5%	1/10W
R906	1-216-664-11	METAL CHIP	3.6K	0.5%	1/10W
R907	1-216-596-11	METAL GLAZE	2.7K	1%	1/10W
R908	1-216-656-11	METAL CHIP	1.6K	0.5%	1/10W
R913	1-216-146-00	METAL CHIP	6.8	5%	1/8W (AMBER)
R913	1-216-296-00	CONDUCTOR, CHIP		(3216)	(GREEN)
		< SWITCH >			
S900	1-572-704-21	SWITCH, KEY BOARD (TUNER/A.MEM)			
S901	1-572-704-21	SWITCH, KEY BOARD (SEL)			
S902	1-572-704-21	SWITCH, KEY BOARD (+ (VOL))			
S903	1-572-704-21	SWITCH, KEY BOARD (- (VOL))			
S904	1-572-704-21	SWITCH, KEY BOARD (DSPL)			
S905	1-572-704-21	SWITCH, KEY BOARD (- (SEEK/MANU))			
S906	1-572-704-21	SWITCH, KEY BOARD (1/ATA)			
S907	1-572-704-21	SWITCH, KEY BOARD (2)			
S908	1-572-704-21	SWITCH, KEY BOARD (3)			
S909	1-572-704-21	SWITCH, KEY BOARD (4)			
S910	1-572-704-21	SWITCH, KEY BOARD (6)			
S911	1-572-704-21	SWITCH, KEY BOARD (SDK)			
S912	1-572-704-21	SWITCH, KEY BOARD (5)			
S913	1-572-704-21	SWITCH, KEY BOARD (SENS/LOUD)			
S914	1-572-704-21	SWITCH, KEY BOARD (OFF)			
S915	1-572-704-21	SWITCH, KEY BOARD (+ (SEEK/MANU))			

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